ER-A320US

SHARP SERVICE MANUAL

CODE : 00ZERA320USME

ELECTRONIC CASH REGISTER

MODEL ER-A320

SRV Key : LKGIM7113RCZZ
PRINTER : CR-812AII

(For "U" version)

CONTENTS

CHAPTER 1. SPECIFICATIONS 1

CHAPTER 2. OPTIONS 4

CHAPTER 3. SRV. RESET AND MASTER RESET 5

CHAPTER 4. HARDWARE DESCRIPTION 5

CHAPTER 5. TEST FUNCTION 10

CHAPTER 6. CIRCUIT DIAGRAM & PWB LAYOUT 13

PARTS GUIDE

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

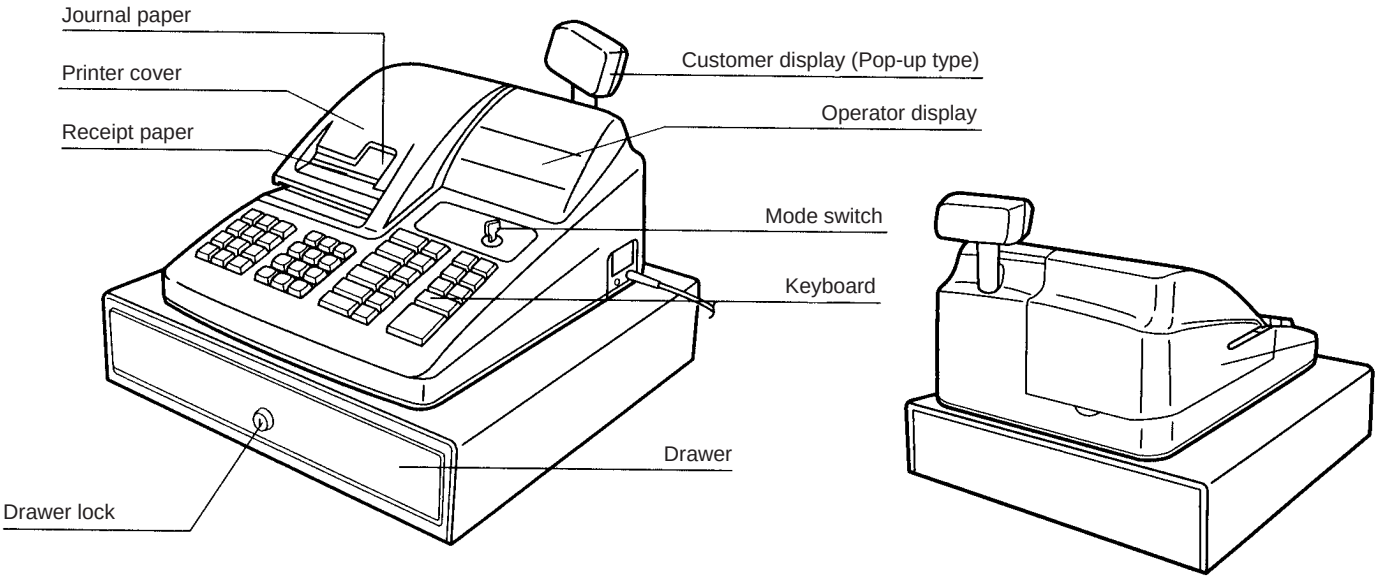
SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

CHAPTER 1 . SPECIFICATIONS

1. Appearance/Rating

1) Appearance

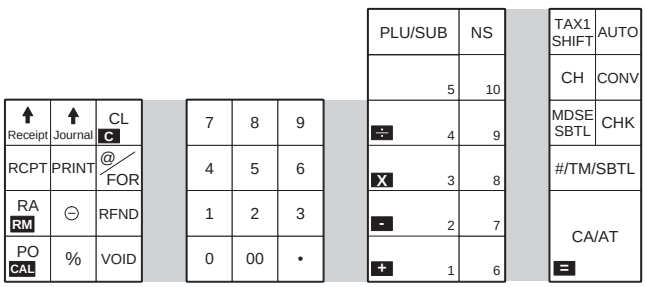


2) Rating

Power source	120V AC ± 10%, 60 Hz
Power consumption	Stand-by: 9W Operating: 35W (Max.)
Operating temperature	32°F to 104°F (0°C to 40°C)
Operating humidity	10% to 90% (RH)
Physical dimensions including the drawer	420 (W) x 423 (D) x 304 (H) mm (16.5 (W) x 16.7 (D) x 12.0 (H) in.)
Weight	13.0 kg (28.7 lbs.)

2. Keyboard

1) Standard keyboard layout



2) Key top name

① Standard key top

KEY TOP	DESCRIPTION
↑RECEIPT	Receipt paper feed key
↑JOURNAL	Journal paper feed key
0~9, 00	Numeric keys
.	Decimal point key
@/FOR	Multiplication key
CL/C	Clear key
PRINT	Validation print key
Dept.1/+	Department 1/ Plus key (Calc. mode)
Dept.2/–	Department 2/ Minus key (Calc. mode)
Dept.3/×	Department 3/ Multiplication key (Calc. mode)
Dept.4/÷	Department 4/ Division key (Calc. mode)
Dept.5~10	Department 5~10 keys
PLU/SUB	PLU/Subdepartment key
RCPT	Receipt print key
⊖	Discount key
AUTO	Automatic sequencing key
%	Percent key
NS	No-sale key

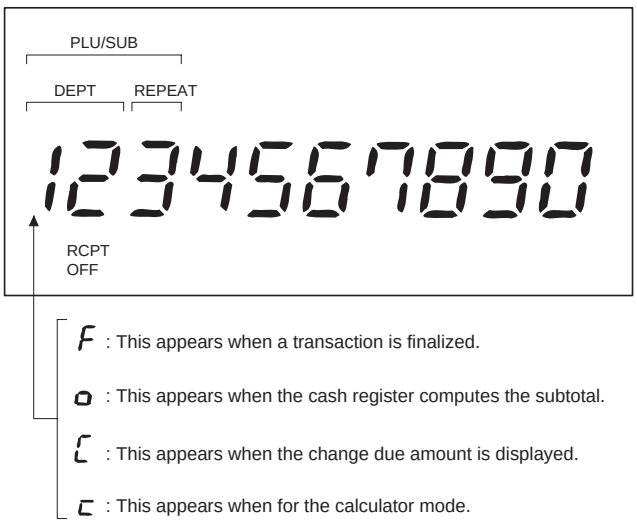
KEY TOP	DESCRIPTION
RA/RM	Received on account/ Recall memory key (Calc. mode)
PO/CAL	Paid out/Calculation mode key
RFND	Refund key
VOID	Void key
CH	Charge key
CHK	Check key
CONV	Conversion key
MDSE SBTL	Merchandise subtotal key
#/TM/SBTL	Non-add code/Time display/Subtotal key
CA/AT/=	Cash/Amount tendered/ Equals key (Calc. mode)
TAX1 SHIFT	TAX1 shift key

② Optional key top

KEY TOP	DESCRIPTION
Dept. 11~40	Department 11~40 keys
DEPT#	Department number entry key
TAX2 SHIFT~TAX4 SHIFT	Tax2~Tax4 shift keys
AUTO2	Automatic sequencing 2 key
CONV2~4	Conversion 2~4 keys
CA2	Cash total 2 key
CH2	Charge 2 key
⊖2	Discount 2 key
%2	Percent 2 key

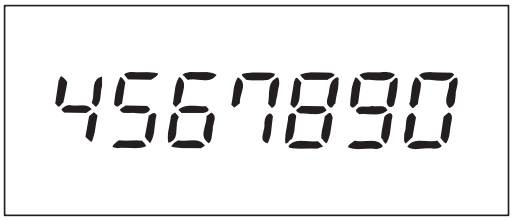
3. Display

1) Operator display


PLU/SUB
DEPT
REPEAT
1234567890
RCPT
OFF
F : This appears when a transaction is finalized.
o : This appears when the cash register computes the subtotal.
C : This appears when the change due amount is displayed.
c : This appears when for the calculator mode.

DISPLAY DEVICE	LED
NUMBER OF LINE	1 line
NUMBER OF POSITIONS	10 positions
COLOR OF DISPLAY	Green
CHARACTER SIZE	14.2mm (H) x 8.0mm (H)

2) Customer display (Pop-up type)



DISPLAY DEVICE	LED
NUMBER OF LINE	1 line
NUMBER OF POSITIONS	7 positions
COLOR OF DISPLAY	Green
CHARACTER SIZE	14.2mm (H) x 8.0mm (H)

3) Lamps

	DISPLAY POSITION	DESCRIPTION
AMOUNT	1~8	
MINUS SIGN	2~10	- : Floating
ERROR	10	E
PGM MODE	10	P
CA/AT CH CHK	10	F : Lights up when a registration is finalized by depressing CA/AT, CH or CHK key
SUBTOTAL/ SHORT TENDER	10	o
CHANGE	10	C : Lights up whenever the change due amount appears in the display.
DEPARTMENT	9~10	No zero-suppressed.
PLU	8~10	No zero-suppressed.
REPEAT	8	Endless count, starting from 2.
DECIMAL POINT	5~1	TAB (4~2)
RECEIPT OFF	9	—
VALIDATION	10	U : Light up when the validation printing is compulsory.
CONVERSION or CALC. MODE	10	c

4. Printer

1) Printer specifications

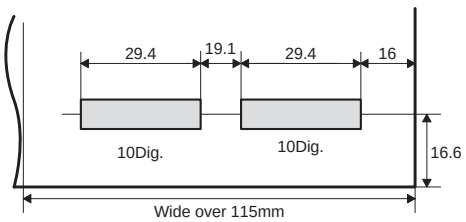
ITEMS	
Model name	CR-812A II
No. of station	2 (Receipt/Journal)
Printing system	Print wheel selective type
Printing capacity	Receipt : Max. 10 chr. Journal : Max. 10 chr. Validation : Max. 20 chr./1 line
Character size	Figure : 1.7mm (W) x 3.2mm (H) Symbol : 2.4mm (W) x 3.2mm (H)
Print pitch	Column distance : 3.35mm for between 1st and 2nd column 3.0mm for after 3rd column Row distance : 5.1mm
Print speed	Approx. 2.5 lines/sec.
Paper feed speed	Approx. 17 lines/sec. at receipt issued.
Reliability	MCBF 2.5 million lines
Validation form sensor	No
Near end sensor	Journal side: No Receipt side: No
Cutter	Manual
Print wheel layout	Parts code: 00BM731002300

10	9	8	7	6	5	4	3	2	1
PL	Z	TX	.	.	.	.	GT	CA	@
—	—	—	—	—	—	—	#	CK	Q
★	★	★	★	★	★	★	%	CH	CG
0	0	0	0	0	0	0	0	RA	TD
1	1	1	1	1	1	1	1	PO	1
2	2	2	2	2	2	2	2	VD	2
3	3	3	3	3	3	3	3	NS	3
4	4	4	4	4	4	4	4	TX	4
5	5	5	5	5	5	5	5	FS	5
6	6	6	6	6	6	6	6	⊖	6
7	7	7	7	7	7	7	7	X	½
8	8	8	8	8	8	8	8	EX	ST
9	9	9	9	9	9	9	9	RF	TL

2) Roll paper

Parts code	DPAPR1006CSZZ
Dimension	44.5± 0.5mm in width Max. 80mm in diameter
Paper quality	Journal/Receipt Fine quality paper Paper thickness : 0.06 to 0.09 mm Paper weight : 52.3 to 64g/m^2 Validation form Normal paper only Thickness : 0.08 to 0.19 mm Size : 115mm or more, 210mm or under (W) x 70mm or more (H)

3) Validation paper

Paper quality	Normal paper and pressure sensitive paper only Thickness : 0.07 to 0.14 mm Size : 115 mm or more (W) x 70 mm or more (H)
Printing area	

4) Inking

Parts code	NROLR6638RCZZ
Ink supply system	Ink roller
Form	Roller
Specification	Material-rubber
Roller life	Approx. 0.6 million lines
Print color	Purple

5) Logo stamp

Material	Porous rubber
Size	30mm (W) x 20mm (H)
Color	Purple
Parts code for ink	UINK1001CCZZ

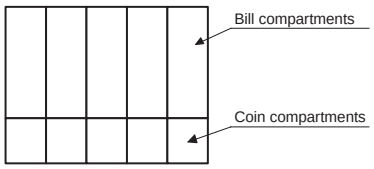
5. Drawer

1) Drawer box and drawer

Model name	SK423
Size	420(W) x 423(D) x 112(H) mm
Color	Gray 368
Material	Metal
Bell	—
Release lever	Standard equipment; Situated at the bottom
Drawer open sensor	Standard equipment

2) Money case

Separation from the drawer	Allowed
Separation of the coin compartments from the money case	Disallowed
Bill separator	—
Number of compartments	5B/5C



5B/5C

3) Lock

Location of the lock	Front	
Method of locking and unlocking	Locking :	Insert the drawer lock key into the lock and turn it 90 degrees counterclockwise.
	Unlocking :	Insert the drawer lock key into the lock and turn it 90 degrees clockwise.
Key No.	SK1-1	

CHAPTER 2. OPTIONS

1. Sales options

No.	NAME	MODEL	DESCRIPTIONS
1	COIN CASE	ER-55CC2	5B/5C (For "U" version)
2	KEY TOP KIT	ER-11KT7	1 x 1 key top
		ER-12KT7	1 x 2 key top
		ER-22KT7	2 x 2 key top
		ER-11DK7G	1 x 1 dummy key
		ER-51DK7G	5 x 1 dummy key

2. Service options

No.	NAME	PARTS CODE	PRICE RANK	DESCRIPTIONS
1	SRV KEY	LKGiM7113RCZZ	AK	
2	MODE KEYGRIP COVER	LKGiM7126RCZZ	AL	OP key only
3	DRIP-PROOF KEYBOARD COVER	GCŌVH7126BHZZ	BE	

3. Supplies

No.	NAME	PARTS CODE	PRICE RANK	DESCRIPTIONS
1	ROLL PAPER	DPAPR1006CSZZ	AR	
2	INK ROLLER	NRŌLR6638RCZZ	AY	
3	INK FOR STAMP	UiNK-1001CCZZ	AK	

CHAPTER 3. SRV RESET AND MASTER RESET

The SRV key is used for operating in the SRV mode.

1. SRV reset (Program Loop Reset)

Used to return the machine back to its operational state after a lockup has occurred.

Procedure

- Method 1

1) Unplug the AC cord from the wall outlet.
2) Set the mode switch to (SRV') position.
3) Plug in the AC cord to the wall outlet.
4) Turn to (SRV) position from (SRV') position.

- Method 2

1) Set the mode switch to PGM position.
2) Unplug the AC cord from the wall outlet.
3) While holding down JOURNAL FEED key and RECEIPT FEED key, plug in the AC cord from the wall outlet.

Note: 1. The ER-A320 printer will cycle and print the following on the journal

★★★★★★ 2

2. Master reset (All memory clear)

Used to clear all memory contents and return machine back to initial settings.
(Returns keyboard back to the default keyboard layout.)

Procedure

1) Unplug the AC cord from the wall outlet.
2) Set the MODE switch to the (SRV') position.
3) Plug in the AC cord to the wall outlet.
4) While holding down JOURNAL FEED key, turn from (SRV') position to the (SRV) position.

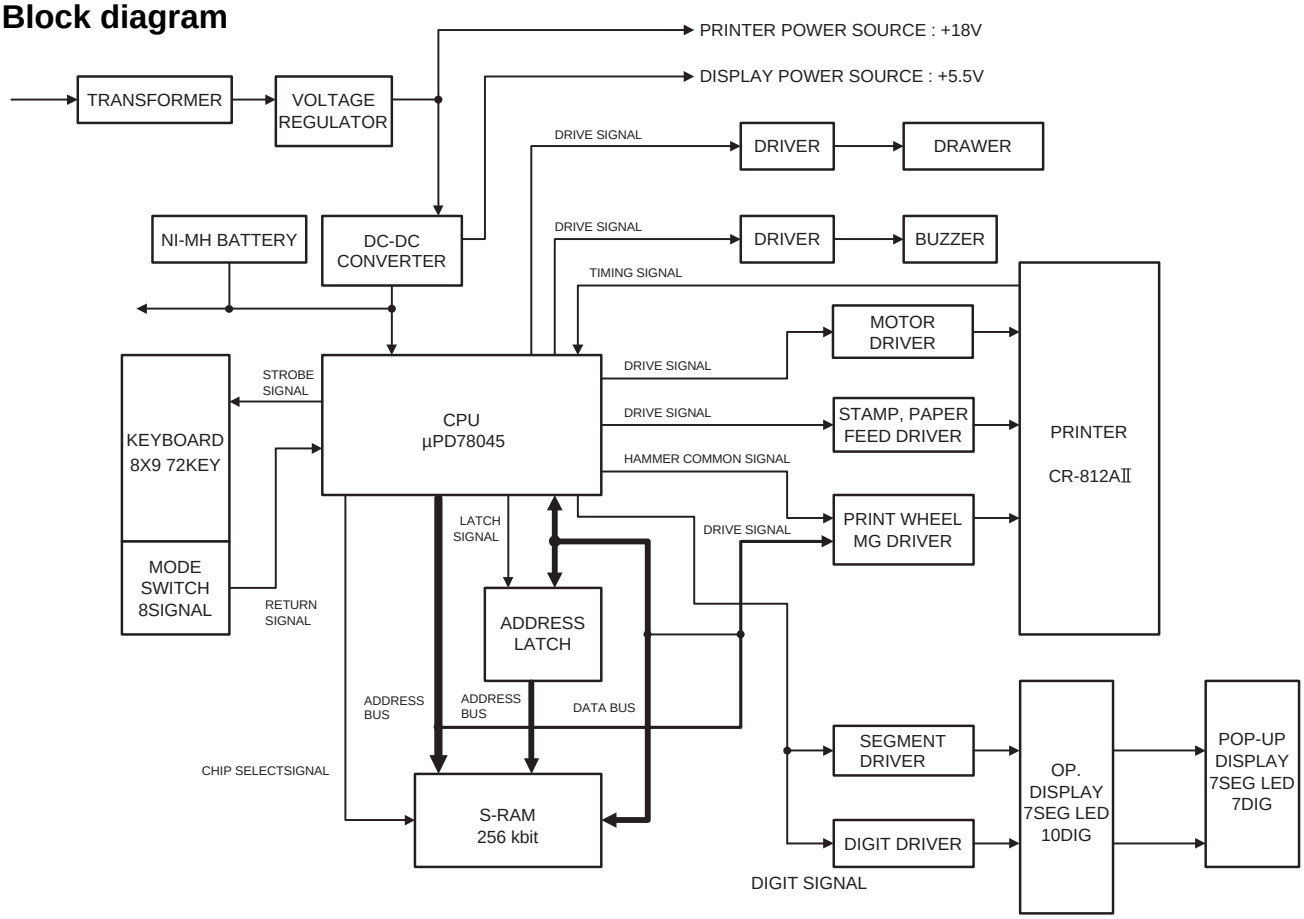
Note: 1. The ER-A320 display will flash the "." decimal point at the right most position and will beep 3 times.

2. The ER-A320 printer will cycle and print the following on the journal

★★★★★★ 1

CHAPTER 4. HARDWARE DESCRIPTION

1. Block diagram

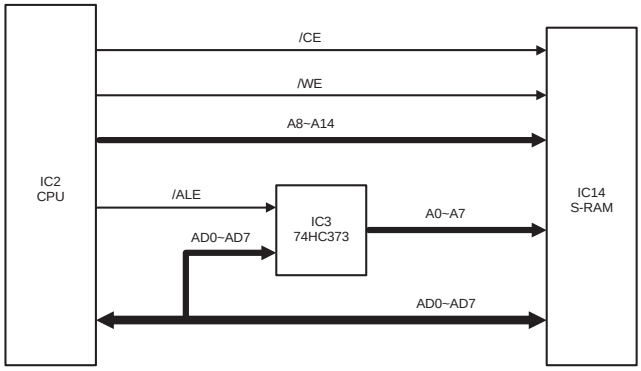


2. CPU (UPD78045F) pin configuration

No.	PIN NAME	SIGNAL NAME	DESCRIPTION	I/O	ACTIVE
1	P94	DIG7	Display digit 7	O	H
2	P93	DIG6	Dlspay digit 6	O	H
3	P92	DIG5	Display digit 5	O	H
4	P91	DIG4	Display digit 4	O	H
5	P90	DIG3	Display digit 3	O	H
6	P81	DIG2	Display digit 2	O	H
7	P80	DIG1	Display digit 1	O	H
8	VDD	VDD	+5V		
9	P27	AD7	RAM Address & Data bus 7 Printer magnet 8	I/O	H
10	P26	AD6	RAM Address & Data bus 6 Printer magnet 7	I/O	H
11	P25	AD5	RAM Address & Data bus 5 Printer magnet 6	I/O	H
12	P24	AD4	RAM Address & Data bus 4 Printer magnet 5	I/O	H
13	P23	AD3	RAM Address & Data bus 3 Printer magnet 4	I/O	H
14	P22	AD2	RAM Address & Data bus 2 Printer magnet 3	I/O	H
15	P21	AD1	RAM Address & Data bus 1 Printer magnet 2	I/O	H
16	P20	AD0	RAM Address & Data bus 0 Printer magnet 1	I/O	H
17	/RESET	/RESET	Reset signal	I	L
18	P74	NU	NU	O	H
19	P73	NU	NU	O	H
20	AVSS	AVSS	GND		
21	P17	KR11	Key return signal 11	I	H
22	P16	KR10	Key return signal 10	I	H
23	P15	KR9	Key return signal 9	I	H
24	P14	KR8	Key return signal 8	I	H
25	P13	KR7	Key return signal 7	I	H
26	P12	KR6	Key return signal 6	I	H
27	P11	KR5	Key return signal 5	I	H
28	P10	VB	Battery voltage	I	
29	AVDD	AVDD	+5V		
30	AVREF	AVREF	+5V (VCC)		
31	XT1	P04	Sub clock: 32.768 kHz	I	
32	XT2	XT2		O	
33	VSS	VSS	GND		
34	X1	X1	Main clock: 4.19 MHz	I	
35	X2	X2		O	
36	P37	MD	Printer motor ON signal	O	H
37	P36	BUZ	Buzzer ON signal	O	H/L
38	P35	RF	Receipt paper feed signal	O	H
39	P34	JF	Journal paper feed signal	O	H
40	P33	STAMP	Stamp ON signal	O	H
41	P32	/ALE	Address latch signal	O	↓
42	P31	/CE	Chip select signal	O	L

No.	PIN NAME	SIGNAL NAME	DESCRIPTION	I/O	ACTIVE
43	P30	/WE	Write signal	O	L
44	P03	RMS	NU	I	
45	P02	JMS	Drawer open sensor	I	
46	P01	α	Printer timing signal	I	↑H
47	P00	PE	Power enable signal	I	H
48	IC	IC	VSS		
49	P72	P72	NU	O	H
50	P71	MG10	Printer magnet 10	O	H
51	P70	MG9	Printer magnet 9	O	H
52	VDD	VDD	+5V		
53	P127	R-COM	Printer receipt common signal	O	H
54	P126	J-COM	Printer journal common signal	O	H
55	P125	VDD	Mode signal (VDD)	I	H
56	P124	DR1	Standard drawer drive signal	O	H
57	P123	KR4	Key return signal 4	I	H
58	P122	KR3	Key return signal 3	I	H
59	P121	KR2	Key return signal 2	I	H
60	P120	KR1	Key return signal 1	I	H
61	P117	A14	RAM Address 14	O	
62	P116	A13	RAM Address 13	O	
63	P115	A12	RAM Address 12	O	
64	P114	A11	RAM Address 11	O	
65	P113	A10	RAM Address 10	O	
66	P112	A9	RAM Address 9	O	
67	P111	A8	RAM Address 8	O	
68	P110	DR2	Option drawer drive signal	O	H
69	P107	DP/ST8	Display segment signal DP Key strobe signal 8	O	H
70	P106	G/ST7	Display segment signal G Key strobe signal 7	O	H
71	VLOAD	VLOAD	GND		
72	P105	F/ST6	Display segment signal F Key strobe signal 6	O	H
73	P104	E/ST5	Display segment signal E Key strobe signal 5	O	H
74	P103	D/ST4	Display segment signal D Key strobe signal 4	O	H
75	P102	C/ST3	Display segment signal C Key strobe signal 3	O	H
76	P101	B/ST2	Display segment signal B Key strobe signal 2	O	H
77	P100	A/ST1	Display segment signal A Key strobe signal 1	O	H
78	P97	DIG10	Display digit signal 10	O	H
79	P96	DIG9	Display digit signal 9	O	H
80	P95	DIG8	Display digit signal 8	O	H

3. RAM control



/WE: Write signal
When the signal is low, writing is performed. When the signal is high, reading is performed.

/CE: Chip select signal

A8-A14: Address bus

AD0-7: Address/Data bus

A0-1: Address bus signal

/ALE: Address latch signal

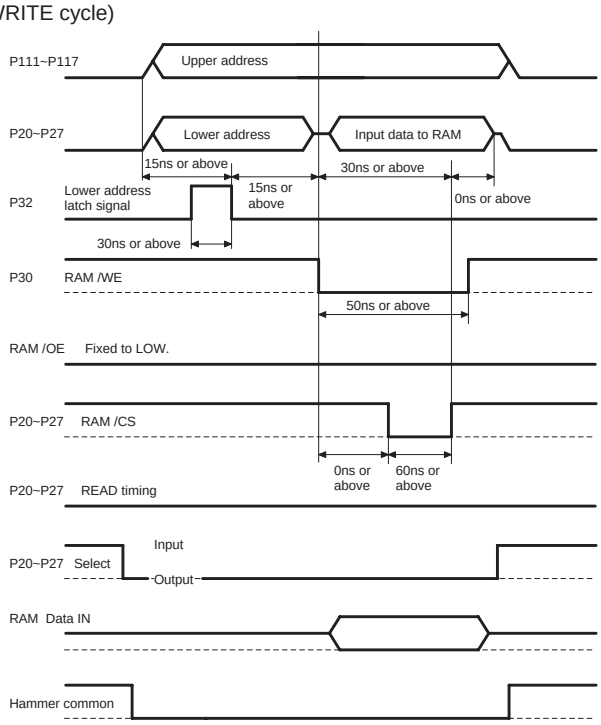
Address signals A0-A7 are used commonly with the data bus. When the address latch signal /ALE is input to IC3, the address/data bus signal AD0-AD7 access the RAM as address signals A0-A7.

(READ)

As shown in the attached time chart, address signals are outputted from P20-P27, P111-P117, and the lower address is latched with P32. The modes at P20-P27 are changed to the input mode. The chip enable signal (P31) is output for the RAM. Then the output data from the RAM are read from P20-P27.

RAM control

(WRITE cycle)

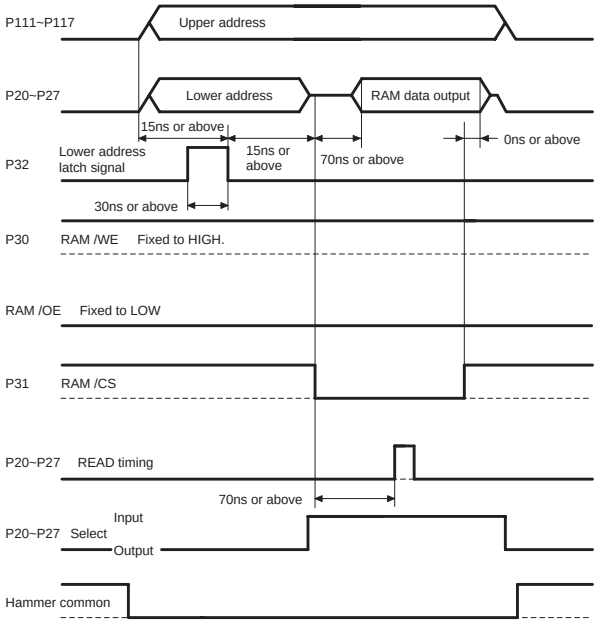


(WRITE)

As shown in the attached time chart, address signals are output from P20-P27, P111-P117, and the lower address is latched with P32. The write enable signal (P30) is output. The write data to the RAM are output from P20-P27. Then the chip enable signal (P31) is output to write the data.

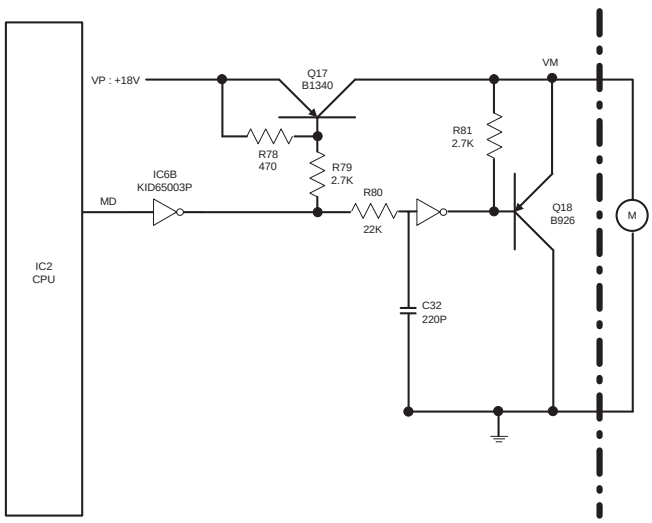
RAM control

(READ cycle)



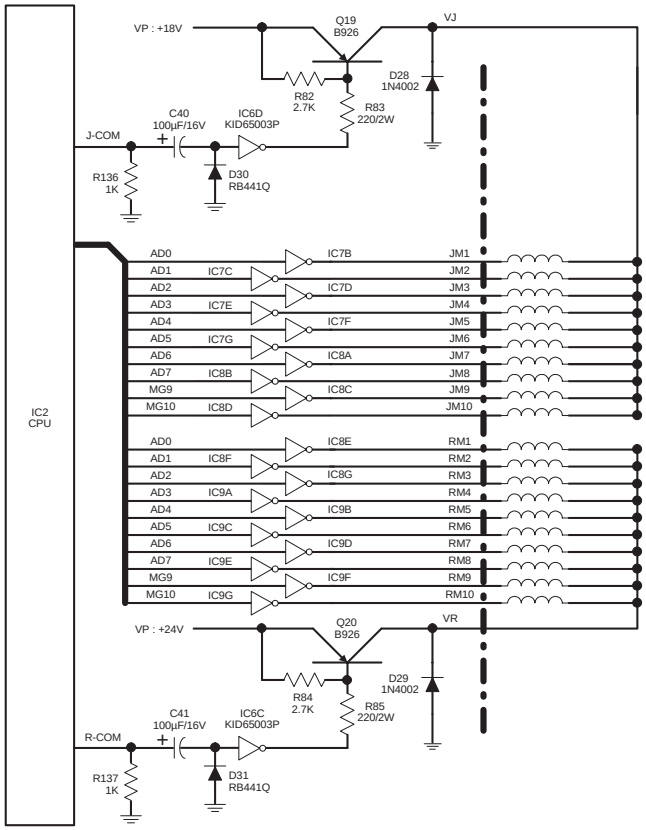
5. Printer motor drive circuit

1) Printer motor drive and brake circuit



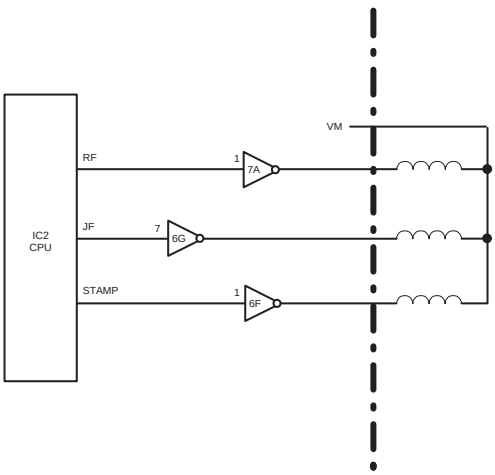
The printer motor is operated by switching operation of transistor Q17 with the motor drive signal MD from the CPU.

2) Print solenoid drive circuit



Since the address bus is used to drive the print solenoid, an access to the RAM cannot be performed during printing. The common voltage of the print solenoid is supplied by switching operations of transistors Q20 and Q19 with the J-COM signal and the R-COM signal.

3) Paper feed solenoid and stamp solenoid drive circuit

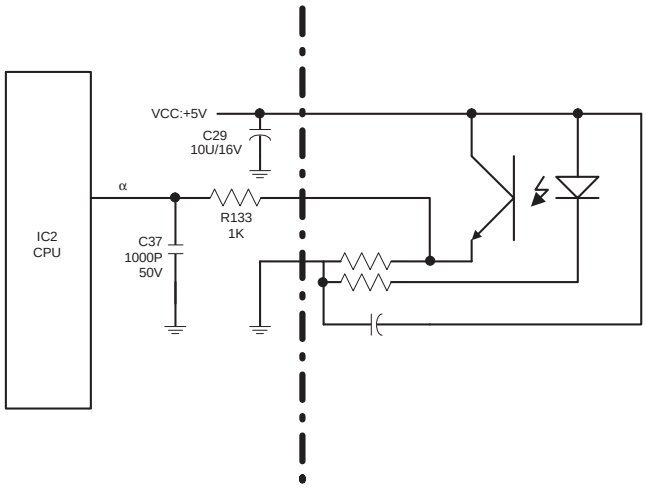


RF: Paper feed solenoid drive signal (Receipt side)

JF: Paper feed solenoid drive signal (Journal side)

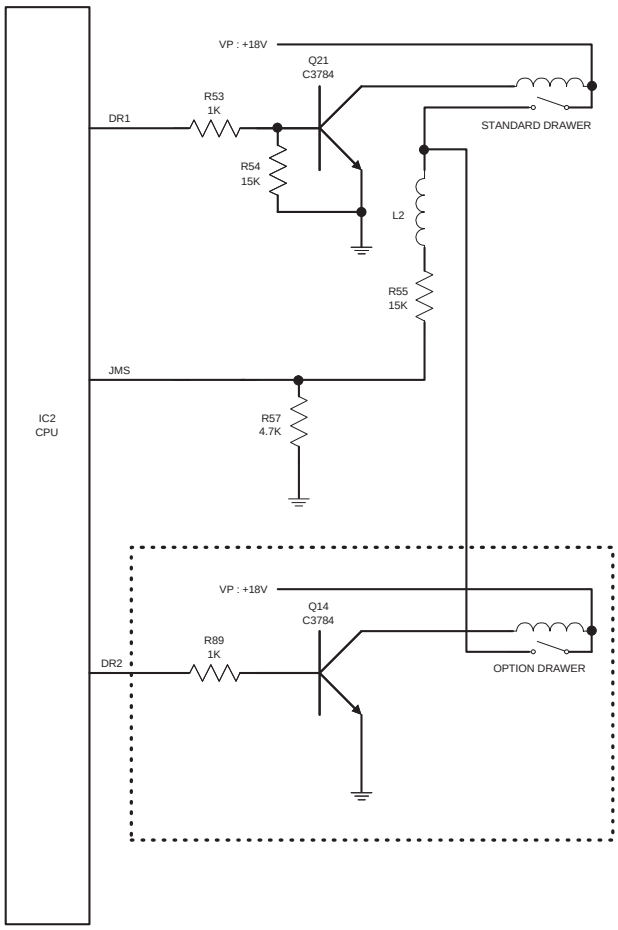
STAMP: Stamp solenoid drive signal (Receipt side)

4) Timing signal circuit



The timing signal α is delivered to the CPU by the photo transistor attached to the printer.

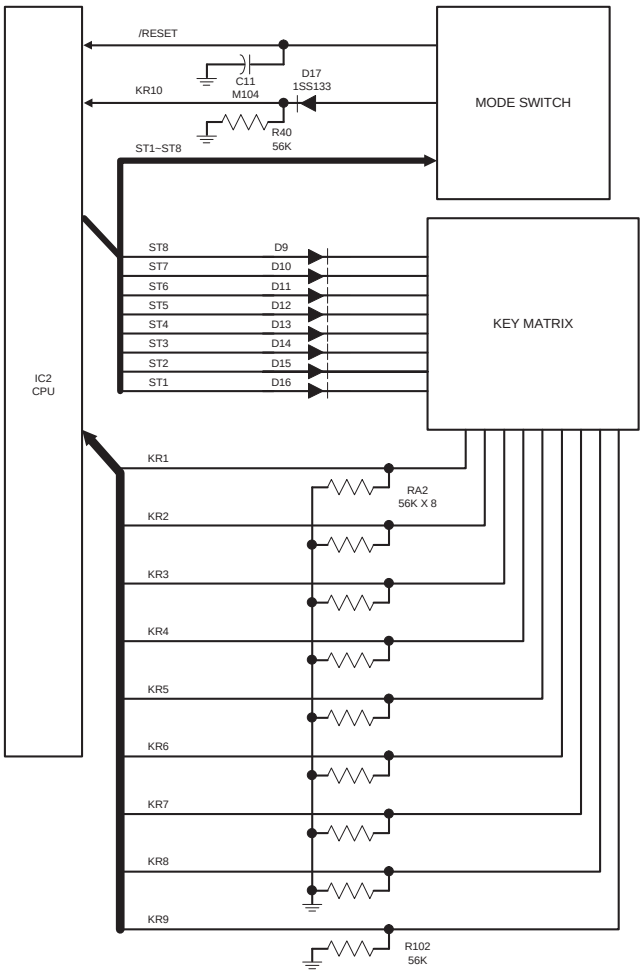
5. Drawer drive circuit



The solenoid is driven by switching operation of transistor Q21 with the drive signal DR1 from the CPU.

When an option drawer is used, the parts enclosed with the dotted line must be attached to the PWB.

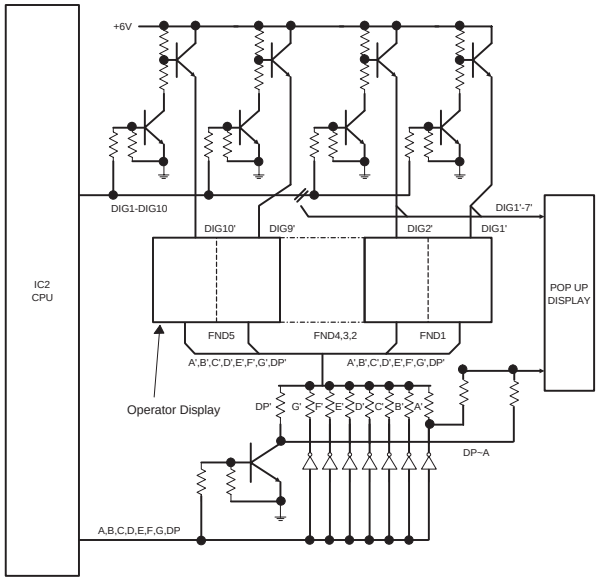
6. Keyboard circuit



The keyboard performs key scanning with the eight strobe signals ST1-ST8, and returns a signal on KR1-KR9 to the CPU.

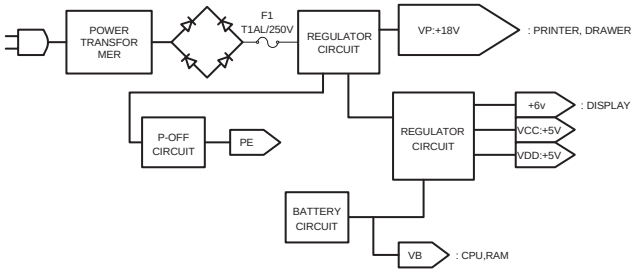
The mode switch performs scanning with the eight strobe signals ST1-ST8, and returns the return signal KR10 to the CPU. When the mode switch is at SRV position, the reset signal /RESET is outputted.

7. Display circuit

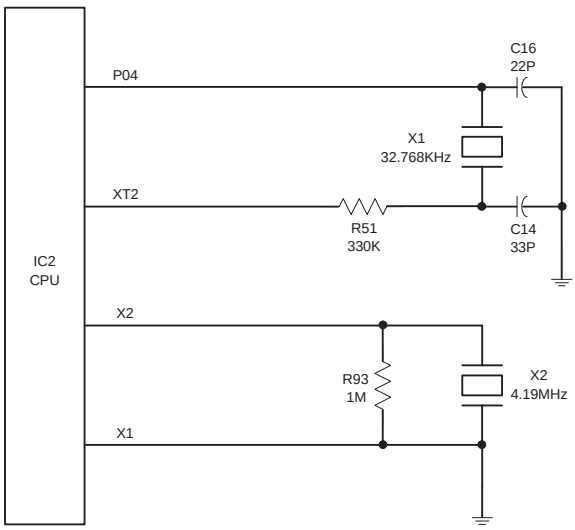


The 7-segment LED is used in the display. The operator display uses 10 digit signals, and the pop-up display uses 7 digit signals.

8. Power supply circuit



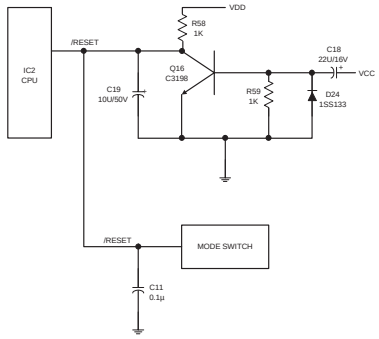
9. Clock generator circuit



X2: 4.19MHz is inputted as the CPU main clock.

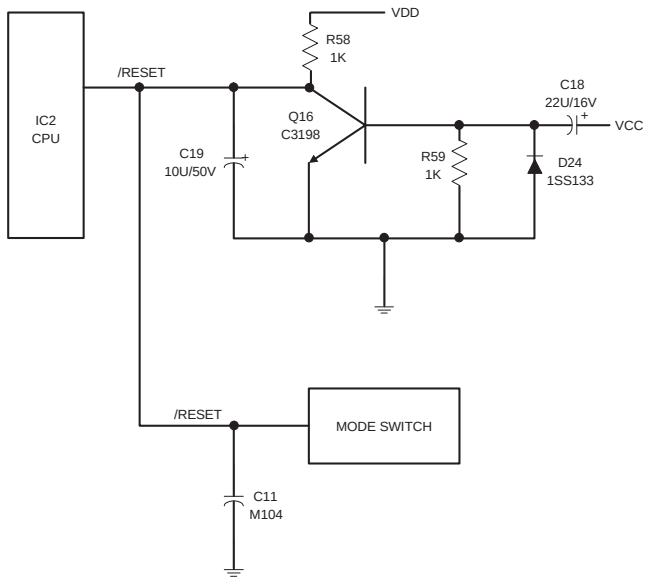
X1: 32.768KHz is inputted as the time renewal clock.

10. Buzzer circuit



This circuit sounds buzzer with the BUZ signal from the CPU.

11. Reset circuit



The reset signal is formed with VCC and VDD. The /RESET signal is also outputted when the mode switch is at SRV position.

CHAPTER 5. TEST FUNCTION

1. Start of test function

The following key operation is required in the SRV mode to start the test.

XXXX → ST

Test command

Master reset is required when the system is to be started for the first time.

2. List of test commands

No.	Test contents	Key operations
1	Mode switch test	1 → ST
2	Keyboard test	XXXX02 → ST
3	Display and Buzzer test	3 → ST
4	Standard Drawer test	4 → ST
5	Option Drawer test	14 → ST
6	Printer test	5 → ST
7	RAM test	6 → ST

NOTE-1: Test message is printed on the journal

NOTE-2: The contents of the totalizer and the preset values are not erased by the test.

3. Test function

1) Test No. 1: Mode switch test

① Key operation

1 → ST

Then, turn the mode switches in the following order.

∗ In the mode switch test, turn the switch rhythmically.

MODE: SRV → PGM → VOID → OFF → OP X/Z → REG → MGR → X1/Z1 → X2/Z2 → SRV

DISPLAY: → (1) → (2) → OFF → (3) → (4) → (5) → (6) → (7) → (0)

② Description

As the mode switch position number is displayed, check the number.

③ Termination

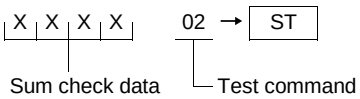
The test can be terminated when the mode switch is turned to the SRV side from other position.

Termination print at normal end 0 1

Termination print and error – – – – 0 1

2) Test No. 2: Keyboard test

① Key operation



(1) Enter the test command in succession to the sum check data of the model.

Model name	Sum check data (Standard keyboard data)
ER-A320	2518

∗ NOTE: Sum check data
The check sum is a decimal number obtained by converting the hard code hexadecimal total of all keys.
The [CA/AT] key are the exception.

(2) Next, push every key on the keyboard except for the receipt and journal keys.
When the [CA/AT] key is pressed, the termination printout is immediately produced assuming that all keys have been pressed.
There is no order in which the keys have to be depressed.
Display: [02 XX] ← XX=position code.

[Keyboard position code of model vs. key to be pressed]
[All key position code]

								65	68	67	58	77	78
								66	55	56	57	48	38
↑ R	↑ J	61	64	63	54	53	62	42	45	35	46	47	37
70	41	31	44	34	43	33	52	32	76	75	36	28	27
10	21	20	24	74	23	73	22	72	15	05	16	17	18
00	11	01	14	04	13	03	12	02	26	25	06	07	08

[ER-A320 standard keyboard layout]

									68	67		77	78
									55	56		48	38
↑ R	↑ J	61		63	54	53			45	35		47	37
70	41	31		34	43	33			76	75			27
10	21	20		74	23	73			15	05			
00	11	01		04	13	03			26	25			08

② Description

Until the depression of the [ST] key, the sum of key position codes is compared with the sum check data, except for the [CA/AT] key.

③ Termination

The test terminates with the depression of the [CA/AT] key and the termination printout is produced.

Termination print at normal end 0 2

Termination print at error – – – – 0 2

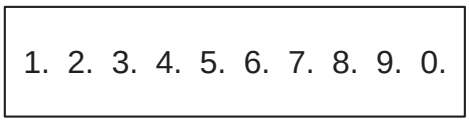
3) Test No.3: Display and buzzer test

① Key operation

3 → [ST]

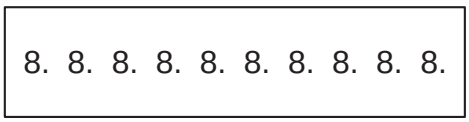
② Description

Continuous beeps and the display are tested.



State of display

The decimal point is shifted digit by digit from the lowest digit (every 200 msec).
Then all segments are lighted (for about 1 sec).



State of display

Pressing any key will terminate the test.

③ Check items

Check that each position display is correct.
Check that the display is even and uniform.
Check that the buzzer sound is normal. (No interruption and vibrations of sounds.)

④ Test end

End print 0 3

4) Test No. 4: Drawer open test

① Key operation

4 → [ST] : For standard drawer

② Description

With this test, the drawer opens and its state is displayed in the following manner:

Drawer open → [XX 0]
Drawer closed → [XX C]
XX=04

∗ When the model that has no drawer sensor switch, displayed is "C".

③ Termination

With depression of any key

Termination print 04 (For standard drawer)

5) Test No. 5: Continuous print test

① Key operation

5 → ST

② Description

The continuous printing as shown below is performed.

③ Termination

After pressing any key, one-cycle of printing is performed before completing the operation.

Print format

PL	Z	TX	.	.	.	.	GT	CA	@
—	—	—	—	—	—	—	#	CK	Q
★	★	★	★	★	★	★	%	CH	CG
0	0	0	0	0	0	0	0	RA	TD
1	1	1	1	1	1	1	1	PO	1
2	2	2	2	2	2	2	2	VD	2
3	3	3	3	3	3	3	3	NS	3
4	4	4	4	4	4	4	4	TX	4
5	5	5	5	5	5	5	5	FS	5
6	6	6	6	6	6	6	6	⊖	6
7	7	7	7	7	7	7	7	X	½
8	8	8	8	8	8	8	8	EX	ST
9	9	9	9	9	9	9	9	RF	TL
0									
	1								
		2							
			3						
				4					
					5				
						6			
							7		
								EX	
									TL

6) Test No.6: RAM test

① Key operation

6 → ST

② Test content

The RAM of 256Kbit (standard provision) is checked.
Read and write of each data are made to the addresses shown in the table below to compare the data. If there is no error, the normal print is made and the machine returns to the key wait state. If an error occurs, the error print is made and the machine returns to the key wait state.

[Test data]

Address	0000	0001	0002	0004	0008	0010	0020	0040
Data	00	01	02	04	08	10	20	40
Address	0080	0100	0200	0400	0800	1000	2000	4000
Data	80	EF	FD	FB	F7	EF	DF	BF

③ Check item

Check the end print.

④ Test end

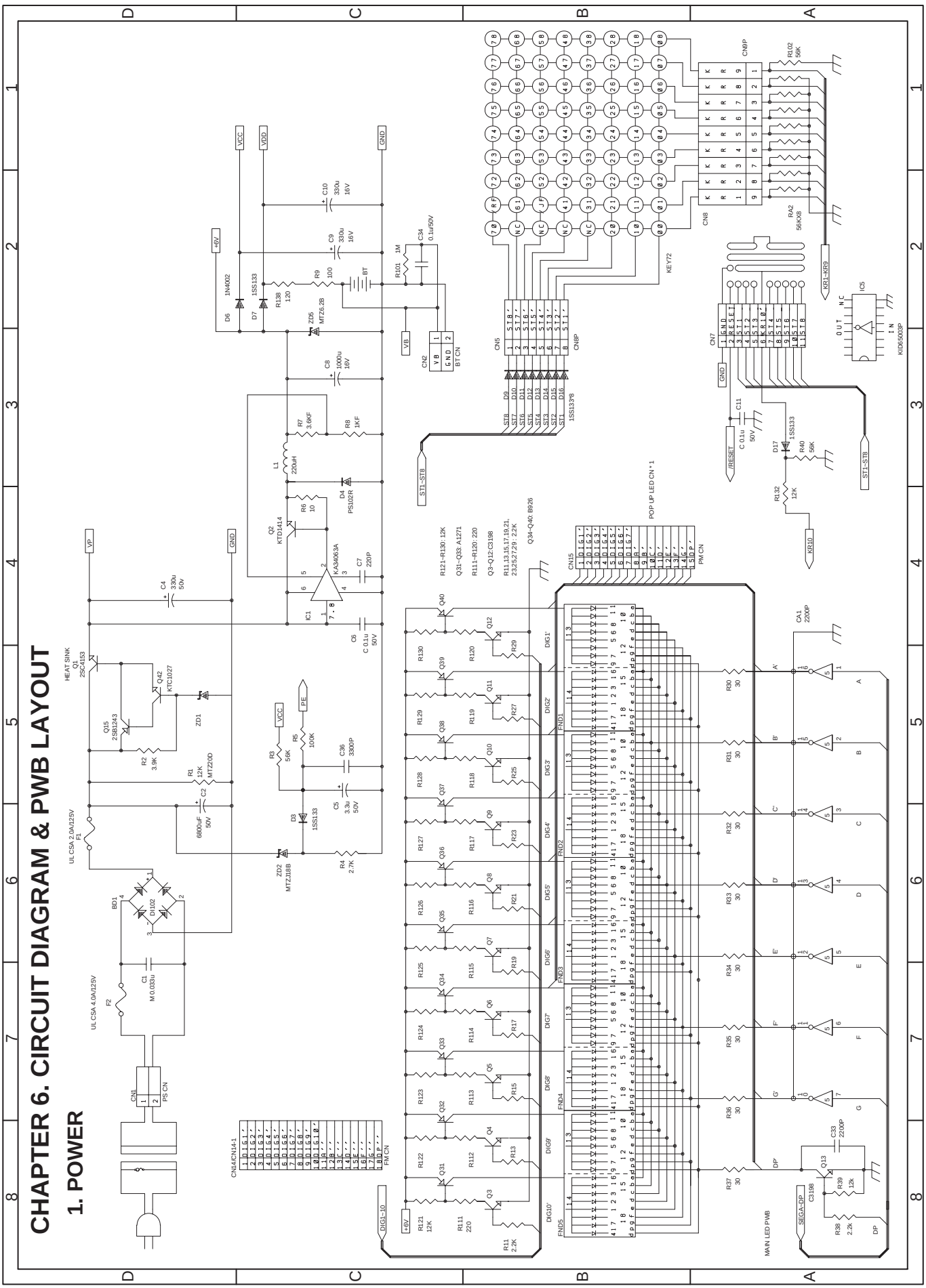
Normal end print 06

Error print AAAA
----06

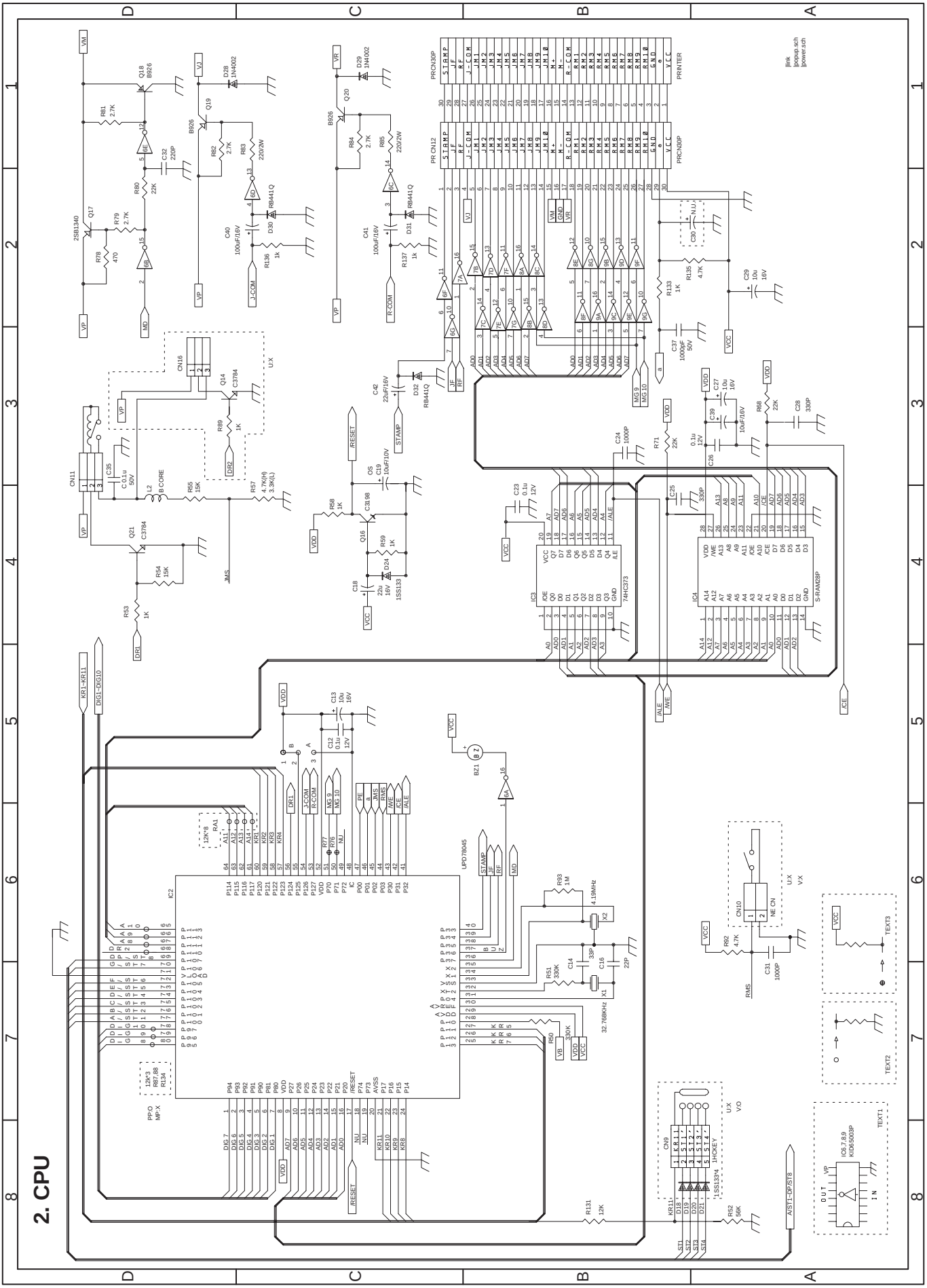
∗ AAAA : Address No.

CHAPTER 6. CIRCUIT DIAGRAM & PWB LAYOUT

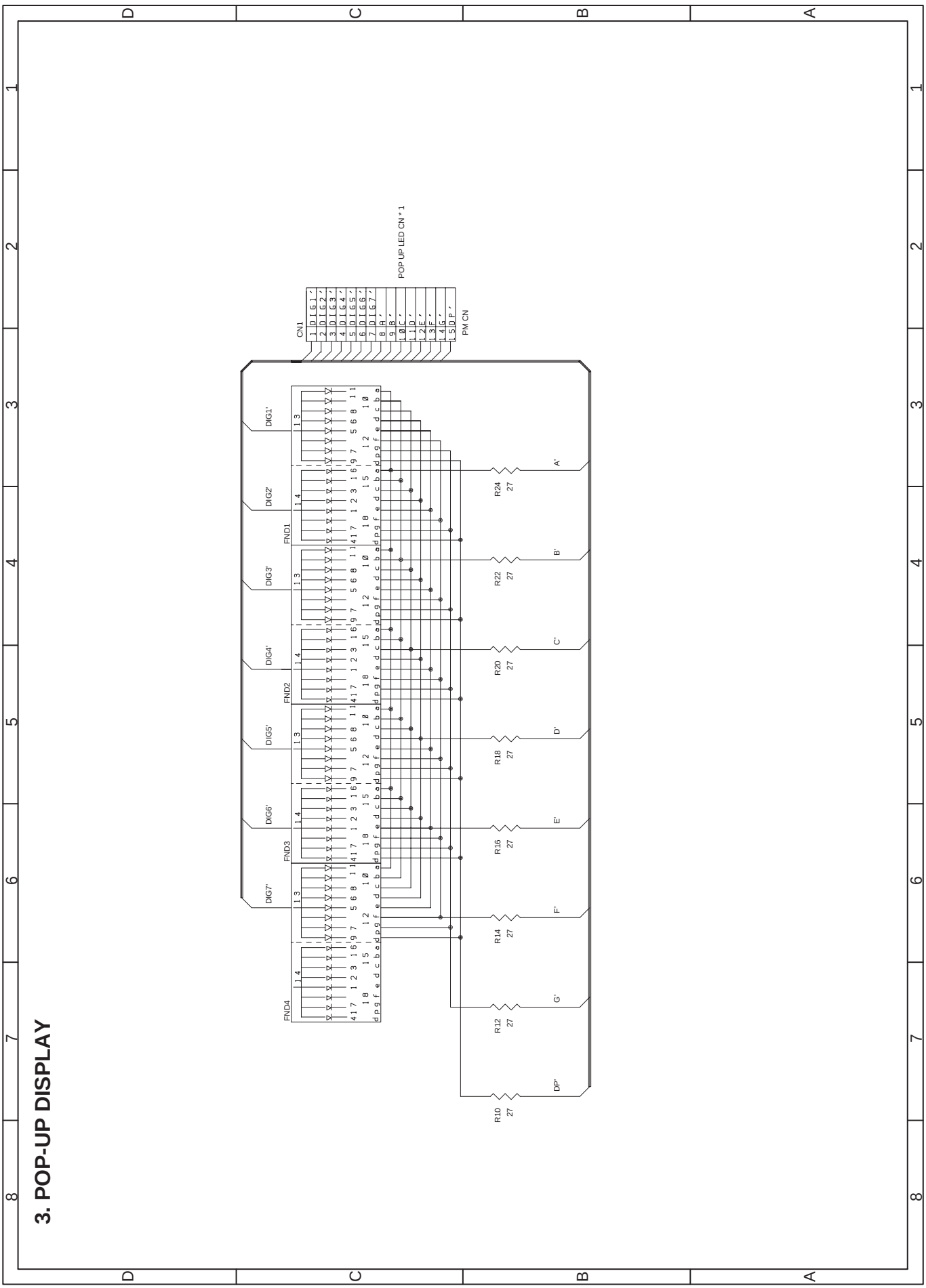
1. POWER



2. CPU

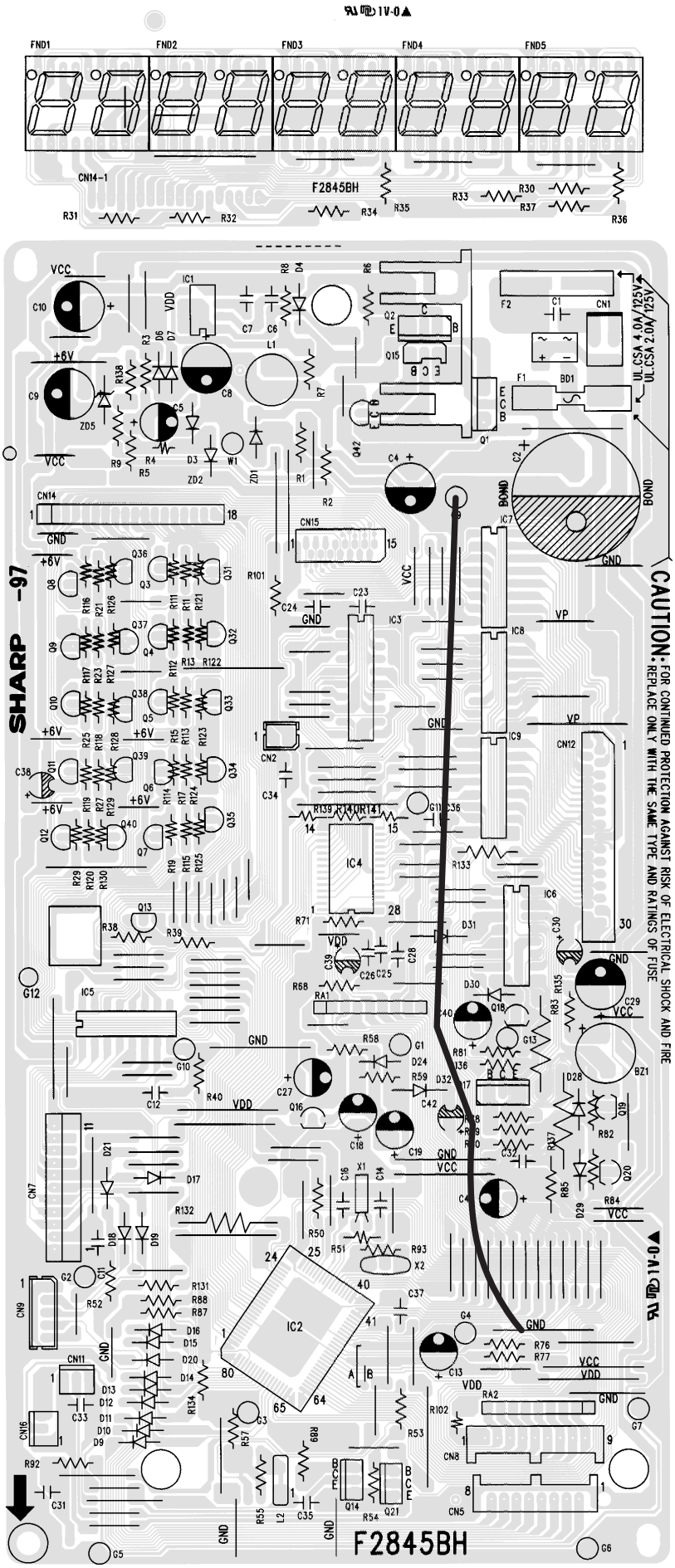


3. POP-UP DISPLAY

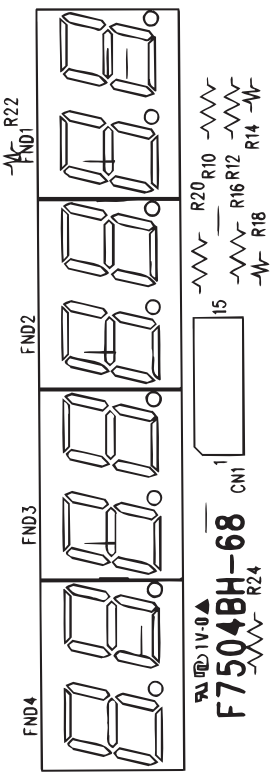


4. PWB LAYOT

MAIN PWB LAYOUT


SHARP -97
F2845BH
CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF ELECTRICAL SHOCK AND FIRE
REPLACE ONLY WITH THE SAME TYPE AND RATINGS OF FUSE

POP-UP PWB LAYOUT



SHARP PARTS GUIDE

MODEL ER-A320

SRV key : LKGiM7113RCZZ
PRINTER : CR-812AII

(For "U" & "A" Version)

CONTENTS

1 Exteriors
2 Keyboard unit
3 Packing material & Accessories
4 Drawer box unit(SK-423type)
5 Main PWB unit
6 Pop up PWB unit
7 Articles for consumption
8 Service route options
■ Index

Because parts marked with "⚠" are indispensable for the machine safety maintenance and poeration, it must be replaced with the parts specific to the product specification.

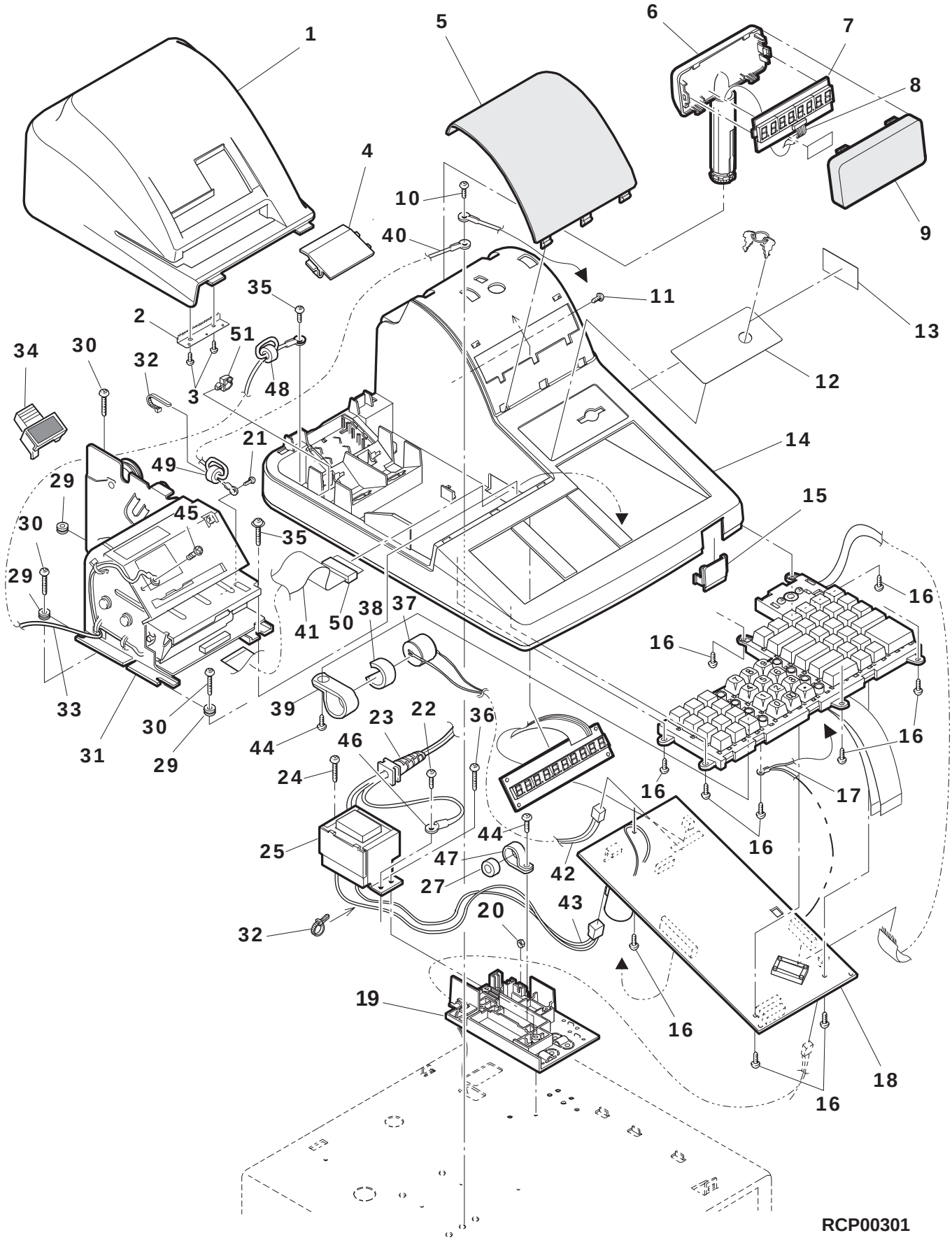
SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

1 Exteriors

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	GCÖVA7128BHSA	AZ	N	D	Printer cover
2	PCUT-6654BHZZ	AE		C	Paper cutter
3	LX-BZ6788BHZZ	AD		C	Screw
4	GCÖVH7124BHSD	AF	N	D	Battery cover
5	PFiLW6962BHZZ	AU		D	Display filter
6	GCABB7861BHZZ	AN		D	Pop up cabinet
7	CPWBF7504BH01	BC		E	Pop up LED PWB unit(NORMAL)
8	QCNW-7815BHZZ	AR		C	P-Flat cable (15p)
9	PFiLW6961BHZZ	AP		D	Pop up filter
10	XHPSD30P06K00	AA		C	Screw (M3×6K)
11	XBBSC30P08000	AA		C	Screw (3×8)
12	HDECP2368BHZZ	AN	N	D	Deco panel
13	TCAUZ6684BHZA	AE		D	Caution label [U.S.A]
	TCAUZ6685BHZB	AF		D	Caution label [Canada]
14	GCABB7236BHZF	BE	N	D	Top cabinet
15	GFTAF6921BHSC	AH		D	Clerk cover A
16	XEBSD30P08000	AA		C	Screw (3×8)
17	QCNW-7805BHZZ	AF		C	GND wire (PWB-K/B-DR)
18	CPWBF2845BH01	BV	N	E	Main PWB unit [include No.17]
19	GCÖVH7125BHSD	AQ	N	D	Trans cover
20	XNESD30-24000	AA		C	Nut (M3)
21	XHBSD40P06000	AA		C	Screw (4×6)
22	XBPBZ40P08K00	AA		C	Screw (4×8K)
⚠ 23	QACCD8411BHZZ	AV		B	AC cord (SP-035)
24	XJPSD30P16X00	AB		C	Screw (3×16X)
⚠ 25	RTRNP2411BHZZ	BF	N	B	Power transformer (120V)
27	RCÖRF6698BHZZ	AR		C	Core (SC18B)
29	PCUSG1220BHZZ	AE		C	Printer cushion
30	XBPSD30P10KS0	AB		C	Screw (3×10KS)
31	Ki-ÖB2367RCZZ	BX	N	E	Prunter unit (CR812A2) [include No.45]
32	LBNDJ2003SCZZ	AA		C	Cable band
33	QCNW-3066BHZZ	AE	N	C	Earth wire
34	PSTM-6658RC01	AR		C	Stamp(YOUR RECEIPT THANK YOU)
35	LX-BZ6769BHZZ	AA		C	Screw
36	LX-BZ6781BHZZ	AB		C	Screw (M3×16)
37	UBATZ6661BHZZ	BA		B	Battery
38	PCUSG7017BHZZ	AC		C	Battery cushion
39	LBNDJ6636BHZZ	AD		C	Battery band
40	QCNW-3065BHZZ	AE	N	C	GND wire
41	QCNW-3057BHZZ	AN	N	C	Printer cable (30P)
42	QCNW-3044BHZZ	AE		C	Battery cable (NI-MH)
43	QCNW-7451BHZZ	AG		C	Trans cable (2pin)
44	XJPSD30P12X00	AB		C	Screw (3×12X)
45	00B1009882///	AC		C	C.C.S. Screw (M3×5.5)
46	QTANP0004BHZA	AE		C	Earth terminal
47	LHLDW6841BHZZ	AD		C	Holder (11N)
48	RCÖRF6712BHZZ	AG		C	Core (OP14C)(RCORFOP14CHZZ)
49	RCÖRF6704BHZZ	AK	N	C	Core (OP-16C)
50	RCÖRF5029SCZZ	AL		C	Core (SSC-452-12H)
51	LHLDW6821BHZZ	AD		C	Q-clamp (S)

1 Exteriors


1
5
6
7
8
9
4
10
40
11
13
12
35
2
51
3
48
34
30
32
21
49
14
29
30
45
35
15
29
41
50
38
37
16
16
33
39
23
22
36
16
30
31
29
44
46
24
16
17
25
44
47
42
27
43
20
32
16
19
18
16
RCP00301

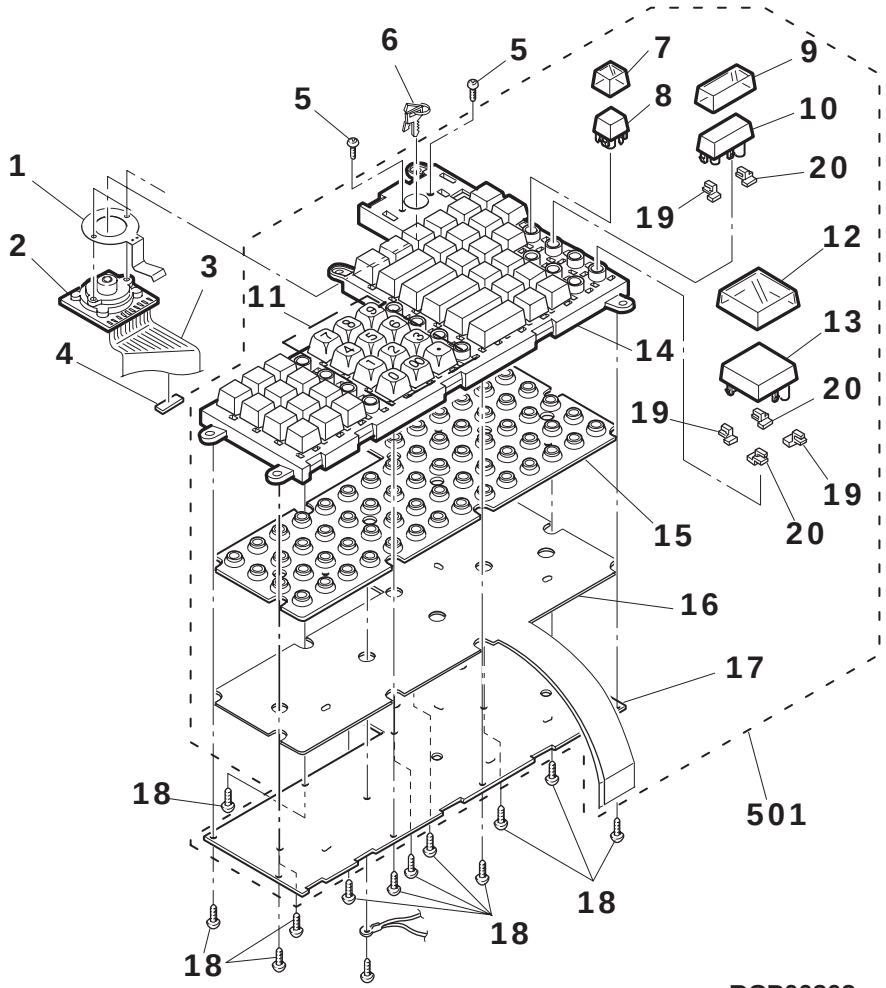
2 Keyboard unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	LANGQ7604BHZZ	AG		C	Mode sw angle
2	LKGiW0001BHZZ	AS		B	Mode switch(Body)
3	QCNW-7804BHZZ	AL		C	Mode cable
4	PHŌG-1060CCZZ	AA		C	Display cushion
5	XJPSD30P08000	AA		C	Screw (3×8)
6	LKGiM7110BHZZ	AE		B	MA key (MA)
	LKGiM7111BHZZ	AE		B	OP key (OP)
7	JKNBZ6897BHZZ	AG		C	Key cap (1×1)
8	JKNBZ6896BHZA	AG		C	Key top (1×1)
9	JKNBZ6899BHZZ	AH		C	Key cap (1×2)
10	JKNBZ6898BHZZ	AH		C	Key top (1×2)
11	JKNBZ6905BHZZ	AF		C	Key top (0)
	JKNBZ6908BHZZ	AK		C	Key top (.)
	JKNBZ6911BHZZ	AK		C	Key top (1)
	JKNBZ6912BHZZ	AK		C	Key top (2)
	JKNBZ6913BHZZ	AK		C	Key top (3)
	JKNBZ6914BHZZ	AK		C	Key top (4)
	JKNBZ6915BHZZ	AK		C	Key top (5)
	JKNBZ6916BHZZ	AK		C	Key top (6)
	JKNBZ6917BHZZ	AK		C	Key top (7)
	JKNBZ6918BHZZ	AK		C	Key top (8)
	JKNBZ6919BHZZ	AK		C	Key top (9)
	JKNBZ69200BHZZ	AK		C	Key top (00)
12	JKNBZ6901BHZA	AL		C	Key cap (2×2)
13	JKNBZ6900BHZA	AN		C	Key top (2×2)
14	LFRM-6700BHZZ	BB		D	Key frame
15	PGUMM6725BHZZ	AZ		C	Key rubber
16	PSHEP6844BHZZ	BC		C	Key sheet unit
17	LPLTM6705BHZZ	AX		C	Key plate
18	XEBSD30P06000	AA		C	Screw (3×6)
19	LHLDZ6837BHZZ	AE		C	Holder L (YELLOW)
20	LHLDZ6836BHZZ	AE		C	Holder R (WHITE)
101	CLABH2516BHZZ	AX	N	D	Key label
501	DUNTK3986BHZZ	BP	N	E	Keyboard [include No.7~17,19,20,101]

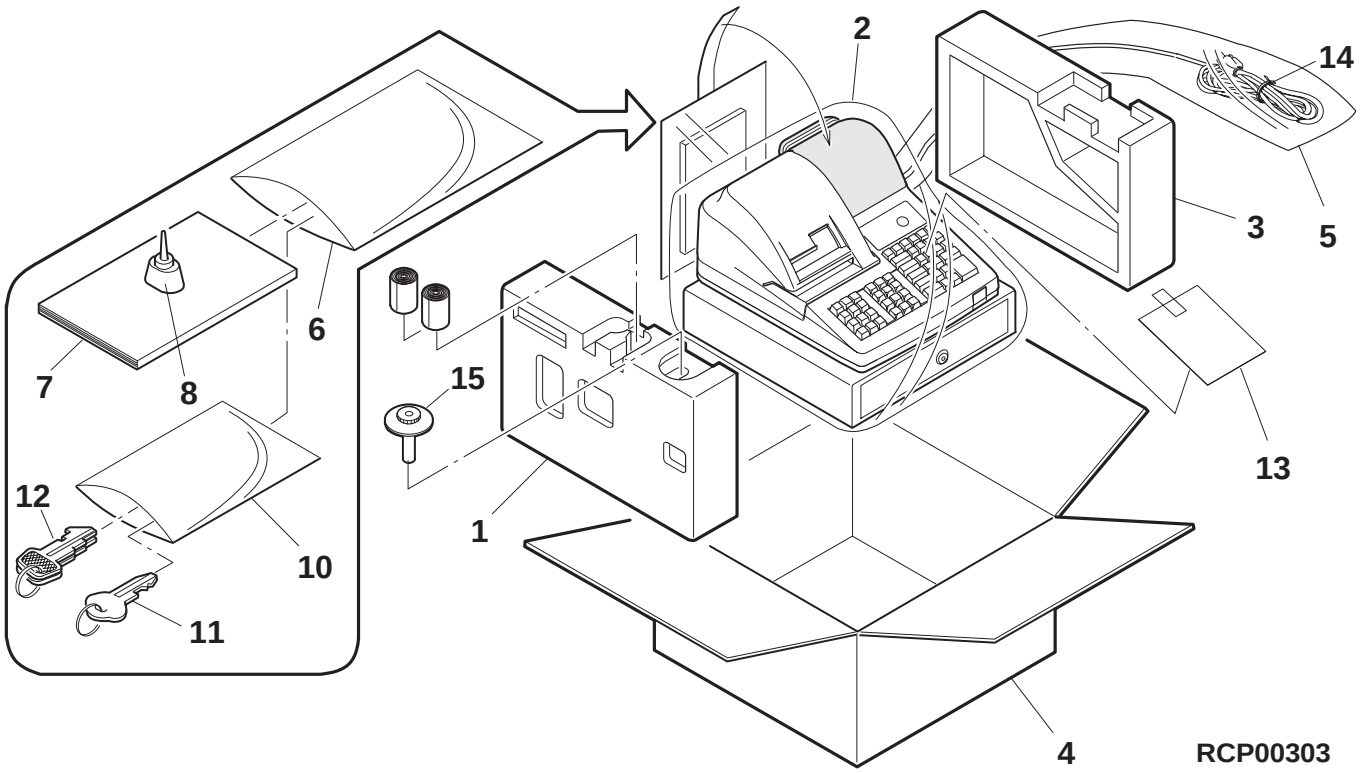
3 Packing material & Accessories

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	SPAKA8367BHZZ	AT		D	Packing add L
2	PSHEP6681BHZZ	AF		C	Packing sheet
3	SPAKA8366BHZZ	AT		D	Packing add R
4	SPAKC3114BHZZ	BB	N	D	Packing case
5	SSAKH4231CCZZ	AA		D	Vinyl bag (140×500mm)
6	SSAKH3015CCZZ	AA		D	Vinyl bag (260×360 30U)
7	TiNSE2400BHZZ	AV	N	D	Instruction book [U.S.A]
	TiNSK2401BHZZ	AZ	N	D	Instruction book [Canada]
8	UiNK-1001CCZZ	AK		S	Ink for stamp (5cc)
10	SSAKH3012CCZZ	AA		D	Vinyl bag (80×120mm)
11	LKGiM7331BHZZ	AE		B	Lock key (1pc)
12	LKGiM7110BHZZ	AE		B	MA key (MA)
	LKGiM7111BHZZ	AE		B	OP key (OP)
13	TCADH6795BHZZ	AC		D	Caution card (Red) [U.S.A]
	TCADH6788BHZA	AC		D	Caution card (Black) [Canada]
14	UBNDA6630BHZZ	AK		C	AC cord band
15	00BF703301010	AQ		C	Paper rolling shaft

2 Keyboard unit



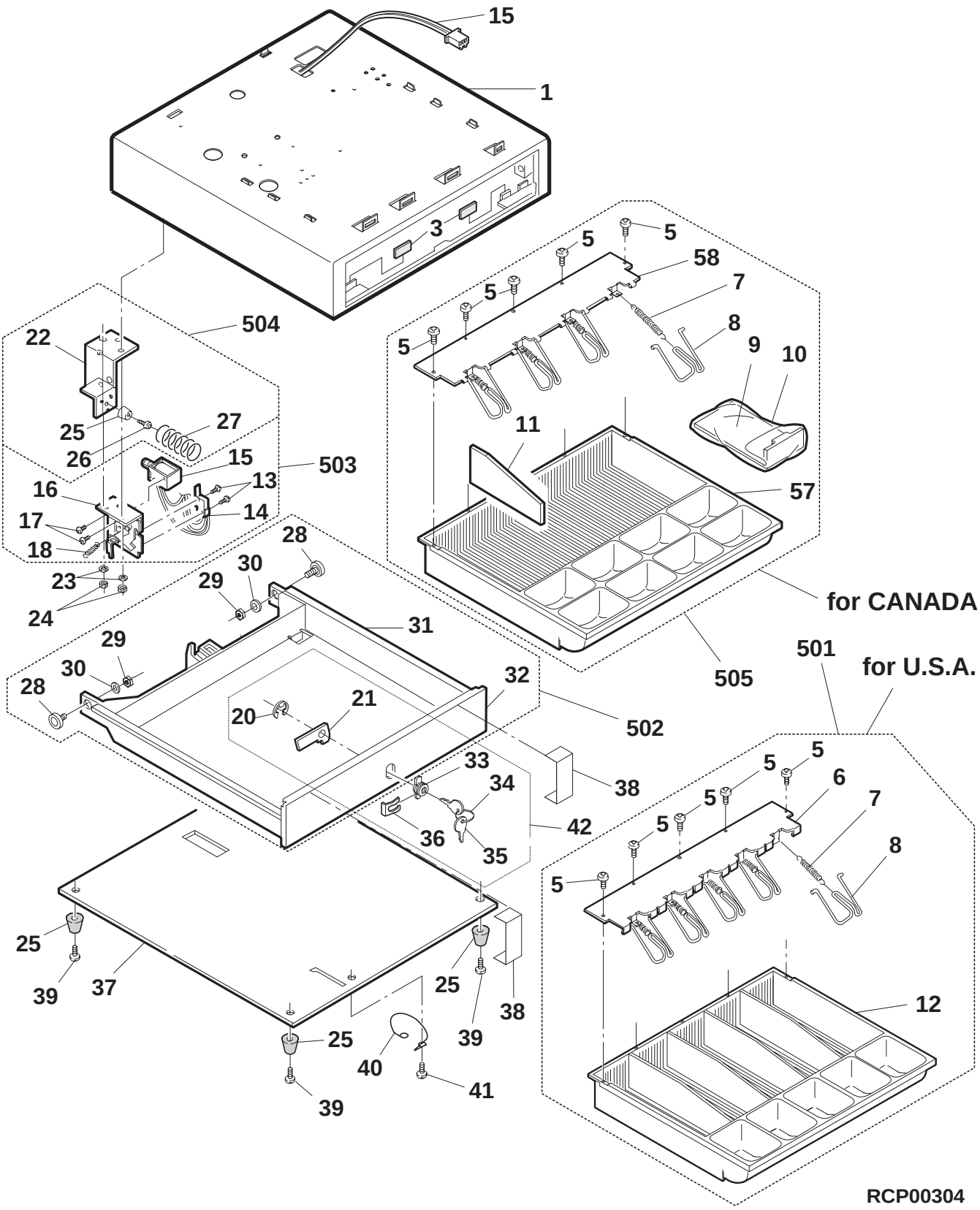
3 Packing material & Accessories



4 Drawer box unit(SK-423type)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
1	CCABM7245BH03	BL	N	D	Cabinet frame unit	[U.S.A]
	CCABM7251BH04	BL	N	D	Cabinet frame unit	[Canada]
3	PGUMM6695BHZZ	AE		C	Stopper gum	
4	NRŌLP6650BHZZ	AP		C	Roller	
5	XUBSD30P08000	AA		C	Screw (3×8)	
6	LBRC−6666BHZZ	AQ		C	Bracket (for 5B)	[U.S.A]
7	MSPRT6714BHZZ	AE		C	Bill spring	
8	MLEVF6695BHZZ	AK		C	Bill lever	
9	PSKR−6629BHZZ	AL		C	Bill separator	[Canada]
10	SSAKA5004CCZZ	AA		D	Vinyl bag (100×300mm)	[Canada]
11	PSKR−6628BHZZ	AG		C	Separator	[Canada]
12	GCAS−6682BHZZ	AZ		D	Money case (5B/5C)	[U.S.A]
13	LX−BZ6776BHZZ	AA		C	Screw	
14	QSW−M6872BHZZ	AR		B	Micro switch	
15	CPLU−6647BH01	AY		B	Solenoid + Drawer cable	
16	CFRM−6683BH01	AW		E	Lock frame unit	
17	LX−BZ6775BHZZ	AA		C	Screw (3×5)	
18	MSPRT6713BHZZ	AD		C	Open lever spring	
20	XRESJ50−06000	AA		C	E type ring (5mm)	
21	MCAMM6633BHZA	AE		C	Lock cam	
22	LFRM−6682BHZZ	AN		D	Bell frame	
23	XWSSD40−10000	AA		C	Washer	
24	XNESD40−32000	AA		C	Nut (M4)	
25	PGUMM6696BHZZ	AE		C	Gum leg	
26	XHBSD30P12000	AA		C	Screw (3×12)	
27	MSPRC6712BHZZ	AF		C	Push out spring	
28	NRŌLP6650BHZZ	AP		C	Roller	
29	XNESD60−50000	AA		C	Nut (M6)	
30	XWSSD60−15000	AA		C	Washer (6mm)	
31	GDRW−6680BHZZ	BE		D	Drawer case frame unit	[U.S.A]
	GDRW−6678BHZZ	BF		D	Drawer case frame unit	[Canada]
32	GCŌVA7146BHZZ	AV		D	Front cover	
33	LKGiW7330BHZZ	AY		B	Lock key (body)	
34	PRNGT6637BHZZ	AA		C	Key ring	
35	LKGiM7331BHZZ	AE		B	Lock key (1pc)	
36	MSPRK6718BHZZ	AF		C	Lock key spring	
37	LPLTM6674BH01	AX		D	Bottom plate	[U.S.A]
	LPLTM6674BHZE	AZ		D	Bottom plate	[Canada]
38	SPAKA8255BHZZ	AC		D	Paper pad	
39	XHBSD40P12000	AA		C	Screw (4×12)	
40	MSPRB6711BHZZ	AD		C	Earth spring	
41	XHPSC30P08000	AA		C	Screw (3×8)	
42	DUNT−1306BHZA	AX		E	Lock key unit	
57	GCAS−6678BHZZ	BC		D	Money case (4B/8C)	[Canada]
58	LBRC−6663BHZZ	AQ		C	Bill bracket (for4B)	[Canada]
501	CCAS−6682BH01	BF		E	Money case unit (5B/5C)	[U.S.A]
502	GDRW−6682BHZZ	BH		E	Drawer case unit (for 5B/5C)	[U.S.A]
	GDRW−6684BHZZ	BH		E	Drawer case unit (for 4B/8C)	[Canada]
503	CLŌK−6676BH01	BH		E	Lock unit	
504	CFRM−6682BH02	AQ		E	Bell frame unit	(include No.22,26,27)
505	CCAS−6678BH01	BF		E	Money case unit	[Canada]
	(Unit)					
901	GBŌXD7139BH01	BX	N	E	Drawer box unit (SK-423 5B/5C)	[U.S.A]
	GBŌXD7144BH01	BY	N	E	Drawer box unit (SK-423 4B/8C)	[Canada]

4 Drawer box unit(SK-423type)



5 Main PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
1	LX-BZ6644RCZZ	AA		C	Screw (3.5×8S)(LX-BZ6644BHZZ)	[for HEAT SINK fixed]
2	PRDAF6666BHZZ	AN		C	Hheat sink	[HEAT SINK]
3	QCNCM1101BHZZ	AC		C	Connector (5273-02A)(2P)	[CN1]
4	QCNCM7057BHZZ	AB		C	Connector (5045-3)(3pin)	[CN11]
5	QCNCW2822BH3J	AH	N	C	Connector (PR)(MLX 52045-3045)	[CN12]
6	QCNCW6882BH1A	AG		C	Connector (11P)(52011-1110)(ST TYPE)	[CN7]
7	QCNCW7081BHZZ	AB		C	Connector (2P)(5267-02A)(Blue)	[CN2]
8	QCNCW7118BH0H	AG		C	Connector (8P)(5229-08CPB)	[CN5]
9	QCNCW7118BH0i	AG		C	Connector (K/B)(9P)(5229-09CPB)	[CN8]
10	QCNCW7201BH1E	AK		C	Connector (15P)(52806-1510)	[CN15]
11	QCNW-7805BHZZ	AF		C	GND wire (PWB-K/B-DR)	
12	QCNW-7811BHZZ	AM		C	F-LED cable (18P)	[CN14,14-1]
13	QCNW-7824BHZZ	AE		C	GND wire	
⚠ 14	QFS-H0001QCZZ	AG	N	A	Fuse (UL/CSA 4.0A 125V 52SB)	[F2]
⚠ 15	QFS-B0323QCZZ	AC		A	Fuse (UL125V 2A)	[F1]
16	QFSHD2109AFZZ	AC		C	Fuse holder (HD2109AF)	[F1]
17	RALMB6646BHZZ	AQ		B	Buzzer	[BZ1]
18	RC-EZ106ARC1A	AD		C	Capacitor (10WV 10μF)	[C19]
19	RC-KZ1054CCZZ	AB		C	Capacitor (10WV 0.1μF)	[C6,11,34,35]
20	RC-Z1N104RCZZ	AA		C	Capacitor (12WV 0.1μF)(RC-Z1N104BHZZ)	[C12,23,26]
21	RCiLC6647RCZZ	AE		C	Coil (220μH)(RCH-110)(RCILC6647BHZZ)	[L1]
22	RCRM-7001BHZZ	AH		B	X-TAL (4.19MHz)	[X2]
23	RCRSP6676RCZZ	AG		B	Crystal (DT38 32.768KHz)	[X1]
24	RMPTC8563QCJB	AC		B	Block resistor (56KΩ×8 1/8W ±5%)	[RA2]
25	VCCCPU1HH220J	AA		C	Capacitor (50WV 22PF)(VCCCPA1HH220J)	[C16]
26	VCCCPU1HH330J	AB		C	Capacitor (50WV 33pF)(VCCCPA1HH330J)	[C14]
27	VCEAGA1CW106M	AA		C	Capacitor (16WV 10μF)	[C13,27,29,39]
28	VCEAGA1CW107M	AC		C	Capacitor (16WV 100μF)	[C40,41]
29	VCEAGA1CW226M	AB		C	Capacitor (16WV 22μF)	[C18,42]
30	VCEAGA1CW337M	AB		C	Capacitor (16WV 330μF)	[C9,10]
31	VCEAGA1HW335M	AB		C	Capacitor (50WV 3.3μF)	[C5]
32	VCEAGD1CW108M	AE		C	AL Capacitor (1000μF/16V)	[C8]
33	VCEAGD1HW337M	AF		C	Capacitor (50WV 330μF)	[C4]
34	VCEAGU1HC688M	AY	N	C	Capacitor (50WV 6800μF)	[C2]
35	VCKYPU1HB102K	AA		C	Capacitor (50WV 0.001μF)(VCKYPA1HB102K)	[C24,31,37]
36	VCKYPU1HB221K	AB		C	Capacitor (50WV 220pF)(VCKYPA1HB221K)	[C7,32]
37	VCKYPU1HB331K	AA		C	Capacitor (50WV 330pF)(VCKYPA1HB331K)	[C25,28]
38	VCKYPU1HB332K	AA		C	Capacitor (50WV 3300pF)(VCKYPA1HB332K)	[C36]
39	VCQYNA1HM333K	AA		C	Capacitor (50WV 0.033μF)	[C1]
40	VHD1N4002G//-1	AA		B	Diode (1N4002G)	[D6,28,29]
41	VHD1D4B42//-1	AD		B	Diode (1D4B42)(VHDDI102/BH-1)	[BD1]
42	VHDDSS133HV-1	AA		B	Diode (DSS133HV)	[D3,7,9~17,24]
43	VHDPS102R//-1	AD		B	Diode (PS102R)	[D4]
44	VHDRB441Q40-1	AD		B	Diode (RB441Q-40)	[D30,31,32]
45	VHEMTZ20D//-1	AA		B	Zener diode (MTZ20D)	[ZD1]
46	VHERD6.2EB/-1	AD		B	Zener diode (RD6.2EB)(VHEMTZ6.2B/-1)	[ZD5]
47	VHEMTZJ18B+-1	AC		B	Zener diode (MTZJ18B)	[ZD2]
48	VHiD78045F097	AY	N	B	CPU (D78045F097)	[IC2]
49	VHiLH52B256N9	AW		B	IC (SRAM 256K 8×32K 100ns)(VHIG76C256F70)	[IC4]
50	VHiMC34063AM1	AG		B	IC (MC34063AM1)(VHIKA34063A-1)	[IC1]
51	VHiKiD65003AP	AE		B	IC (KD65003AP)	[IC5~9]
52	VHiMC74HC373N	AK		B	IC (MC74HC373)(VHISN74HC373N)	[IC3]
53	VHPHDSP5621-1	AM		B	LED (2SEG)(HDSP5621)	[FND1~5]
54	VRD-RC2EY000J	AA		C	Resistor (1/4W 0Ω ±5%)	[R139,141]
	VRD-RC2EY000J	AA		C	Resistor (1/4W 0Ω ±5%)	[R140]
55	VRD-RC2EY100J	AA		C	Resistor (1/4W 10Ω ±5%)	[R6]
56	VRD-RC2EY101J	AA		C	Resistor (1/4W 100Ω ±5%)	[R9]
57	VRD-RC2EY102G	AA		C	Resistor (1/4W 1KΩ ±2%)(VRD-RC2EY102F)	[R8]
58	VRD-RC2EY102J	AA		C	Resistor (1/4W 1.0KΩ ±5%)	[R53,58,59,76,77,133,136,137]
59	VRD-RC2EY104J	AA		C	Resistor (1/4W 100KΩ ±5%)	[R5]
60	VRD-RC2EY105J	AA		C	Resistor (1/4W 1.0MΩ ±5%)	[R93,101]
61	VRD-RC2EY121J	AA		C	Resistor (1/4W 120Ω ±5%)	[R138]
62	VRD-RC2EY123J	AA		C	Resistor (1/4W 12KΩ ±5%)	[R1,39,121~132]
63	VRD-RC2EY153J	AA		C	Resistor (1/4W 15KΩ ±5%)	[R54,55]
64	VRD-RC2EY221J	AA		C	Resistor (1/4W 220Ω ±5%)	[R111~120]
65	VRD-RC2EY222J	AA		C	Resistor (1/4W 2.2KΩ ±5%)	[R11,13,15,17,19,21,23,25,27,29,38]
66	VRD-RC2EY223J	AA		C	Resistor (1/4W 22KΩ ±5%)	[R68,71,80]
67	VRD-RC2EY272J	AA		C	Resistor (1/4W 2.7KΩ ±5%)	[R4,79,81,82,84]
68	VRD-RC2EY300J	AA		C	Resistor (1/4W 30Ω ±5%)	[R30~37]
69	VRD-RC2EY334J	AA		C	Resistor (1/4W 330KΩ ±5%)	[R50,51]
70	VRD-RC2EY362G	AA		C	Resistor (1/4W 3.6KΩ ±2%)(VRD-RC2EY362F)	[R7]
71	VRD-RC2EY392J	AA		C	Resistor (1/4W 3.9KΩ ±5%)	[R2]
72	VRD-RC2EY471J	AA		C	Resistor (1/4W 470Ω ±5%)	[R78]
73	VRD-RC2EY472J	AA		C	Resistor (1/4W 4.7KΩ ±5%)	[R57,92,135]
74	VRD-RC2EY563J	AA		C	Resistor (1/4W 56KΩ ±5%)	[R3,40,52,102]
75	VRS-RE3DA221J	AB		C	Resistor (2W 220Ω ±5%)	[R83,85]
76	VSKTA1271//-1	AE		B	Transistor (KTA1271)(VS2SA1271-/-1)	[Q31,32,33]
77	VS2SB1243++-1	AG	N	B	Transistor (2SB1243)	[Q15]
78	VS2SB1340//-1	AL		B	Transistor (2SB1340)	[Q17]
79	VS2SB926-S/TC	AD		B	Transistor (2SB926-S/TC)(KA1270)(VSKTA1270//-1)	[Q18,19,20,34~40]

5 Main PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
80	VSDSC001−//−1	AA		B	Transistor (2SC3198)(VS2SC3198-/-1) [Q3~13,16]
81	VS2SC3784−//−1	AD		B	Transistor (2SC3784) [Q21]
82	VS2SC4153−//−1	AG		B	Transistor (2SC4153) [Q1]
83	VSKTC1027//−1	AG	N	B	Transistor (KTC1027) [Q42]
84	VSKTD1414//−1	AL		B	Transistor (KTD1414) [Q2]
85	XBPSD30P06000	AA		C	Screw (3×6) [for TR fixed]
	(Unit)				
901	CPWBF2845BH01	BV	N	E	Main PWB unit

6 Pop up PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	QCNCW7202BH1E	AK		C	Connector (52807-1510) [CN1]
2	VHPHDSP5621−1	AM		B	LED (2SEG)(HDSP5621) [FND1,2,3,4]
3	VRD−RC2EY270J	AA		C	Resistor (1/4W 27Ω ±5%) [R10,12,14,16,18,20,22,24]
901	CPWBF7504BH01	BC		E	Pop up PWB unit (NORMAL)

7 Articles for consumption

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	DPAPR1006CSZZ	AR		S	Roll paper (5roll/pack)
2	NRÖLR6638RCZZ	AY		S	Ink roller (purple)
3	UiNK−1001CCZZ	AK		S	Ink for stamp (5cc)

8 Service route options

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	LKGiM7113RCZZ	AK		S	Service key
2	LKGiM7126RCZZ	AL		S	Mode key grip cover [OP key only]
3	GCÖVH7126BHZZ	BE		S	Drip-proof keyboard cover

■ Index

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
【C】					
CCABM7245BH03	4- 1	BL	N	D	
CCABM7251BH04	4- 1	BL	N	D	
CCAS-6678BH01	4-505	BF		E	
CCAS-6682BH01	4-501	BF		E	
CFRM-6682BH02	4-504	AQ		E	
CFRM-6683BH01	4- 16	AW		E	
CLABH2516BHZZ	2-101	AX	N	D	
CLŌK-6676BH01	4-503	BH		E	
CPLU-6647BH01	4- 15	AY		B	
CPWBF2845BH01	1- 18	BV	N	E	
〃	5-901	BV	N	E	
CPWBF7504BH01	1- 7	BC		E	
〃	6-901	BC		E	
【D】					
DPAPR1006CSZZ	7- 1	AR		S	
DUNT-1306BHZA	4- 42	AX		E	
DUNTK3986BHZZ	2-501	BP	N	E	
【G】					
GBŌXD7139BH01	4-901	BX	N	E	
GBŌXD7144BH01	4-901	BY	N	E	
GCABB7236BHZF	1- 14	BE	N	D	
GCABB7861BHZZ	1- 6	AN		D	
GCAS-6678BHZZ	4- 57	BC		D	
GCAS-6682BHZZ	4- 12	AZ		D	
GCŌVA7128BHSA	1- 1	AZ	N	D	
GCŌVA7146BHZZ	4- 32	AV		D	
GCŌVH7124BHSD	1- 4	AF	N	D	
GCŌVH7125BHSD	1- 19	AQ	N	D	
GCŌVH7126BHZZ	8- 3	BE		S	
GDRW-6678BHZZ	4- 31	BF		D	
GDRW-6680BHZZ	4- 31	BE		D	
GDRW-6682BHZZ	4-502	BH		E	
GDRW-6684BHZZ	4-502	BH		E	
GFTAF6921BHSC	1- 15	AH		D	
【H】					
HDECP2368BHZZ	1- 12	AN	N	D	
【J】					
JKNBZ6896BHZA	2- 8	AG		C	
JKNBZ6897BHZZ	2- 7	AG		C	
JKNBZ6898BHZZ	2- 10	AH		C	
JKNBZ6899BHZZ	2- 9	AH		C	
JKNBZ6900BHZA	2- 13	AN		C	
JKNBZ6901BHZA	2- 12	AL		C	
JKNBZ6905BHZZ	2- 11	AF		C	
JKNBZ6908BHZZ	2- 11	AK		C	
JKNBZ6911BHZZ	2- 11	AK		C	
JKNBZ6912BHZZ	2- 11	AK		C	
JKNBZ6913BHZZ	2- 11	AK		C	
JKNBZ6914BHZZ	2- 11	AK		C	
JKNBZ6915BHZZ	2- 11	AK		C	
JKNBZ6916BHZZ	2- 11	AK		C	
JKNBZ6917BHZZ	2- 11	AK		C	
JKNBZ6918BHZZ	2- 11	AK		C	
JKNBZ6919BHZZ	2- 11	AK		C	
JKNBZ6920BHZZ	2- 11	AK		C	
【K】					
Ki-ŌB2367RCZZ	1- 31	BX	N	E	
【L】					
LANGQ7604BHZZ	2- 1	AG		C	
LBNDJ2003SCZZ	1- 32	AA		C	
LBNDJ6636BHZZ	1- 39	AD		C	
LBRC-6663BHZZ	4- 58	AQ		C	
LBRC-6666BHZZ	4- 6	AQ		C	
LFRM-6682BHZZ	4- 22	AN		D	
LFRM-6700BHZZ	2- 14	BB		D	
LHLDW6821BHZZ	1- 51	AD		C	
LHLDW6841BHZZ	1- 47	AD		C	
LHLDZ6836BHZZ	2- 20	AE		C	
LHLDZ6837BHZZ	2- 19	AE		C	
LKGiM7110BHZZ	2- 6	AE		B	
〃	3- 12	AE		B	
LKGiM7111BHZZ	2- 6	AE		B	
〃	3- 12	AE		B	
LKGiM7113RCZZ	8- 1	AK		S	
LKGiM7126RCZZ	8- 2	AL		S	
LKGiM7331BHZZ	3- 11	AE		B	
〃	4- 35	AE		B	
LKGiW0001BHZZ	2- 2	AS		B	
LKGiW7330BHZZ	4- 33	AY		B	
LPLTM6674BH01	4- 37	AX		D	
LPLTM6674BHZE	4- 37	AZ		D	
LPLTM6705BHZZ	2- 17	AX		C	
LX-BZ6644RCZZ	5- 1	AA		C	
LX-BZ6769BHZZ	1- 35	AA		C	
LX-BZ6775BHZZ	4- 17	AA		C	
LX-BZ6776BHZZ	4- 13	AA		C	
LX-BZ6781BHZZ	1- 36	AB		C	
LX-BZ6788BHZZ	1- 3	AD		C	
【M】					
MCAMM6633BHZA	4- 21	AE		C	
MLEVF6695BHZZ	4- 8	AK		C	
MSPRB6711BHZZ	4- 40	AD		C	
MSPRC6712BHZZ	4- 27	AF		C	
MSPRK6718BHZZ	4- 36	AF		C	
MSPRT6713BHZZ	4- 18	AD		C	
MSPRT6714BHZZ	4- 7	AE		C	
【N】					
NRŌLP6650BHZZ	4- 4	AP		C	
〃	4- 28	AP		C	
NRŌLR6638RCZZ	7- 2	AY		S	
【P】					
PCUSG1220BHZZ	1- 29	AE		C	
PCUSG7017BHZZ	1- 38	AC		C	
PCUT-6654BHZZ	1- 2	AE		C	
PFiLW6961BHZZ	1- 9	AP		D	
PFiLW6962BHZZ	1- 5	AU		D	
PGUMM6695BHZZ	4- 3	AE		C	
PGUMM6696BHZZ	4- 25	AE		C	
PGUMM6725BHZZ	2- 15	AZ		C	
PHŌG-1060CCZZ	2- 4	AA		C	
PRDAF6666BHZZ	5- 2	AN		C	
PRNGT6637BHZZ	4- 34	AA		C	
PSHEP6681BHZZ	3- 2	AF		C	
PSHEP6844BHZZ	2- 16	BC		C	
PSKR-6628BHZZ	4- 11	AG		C	
PSKR-6629BHZZ	4- 9	AL		C	
PSTM-6658RC01	1- 34	AR		C	
【Q】					
QACCD8411BHZZ	1- 23	AV		B	
QCNCM1101BHZZ	5- 3	AC		C	
QCNCM7057BHZZ	5- 4	AB		C	
QCNCW2822BH3J	5- 5	AH	N	C	
QCNCW6882BH1A	5- 6	AG		C	
QCNCW7081BHZZ	5- 7	AB		C	
QCNCW7118BH0H	5- 8	AG		C	
QCNCW7118BH0i	5- 9	AG		C	
QCNCW7201BH1E	5- 10	AK		C	
QCNCW7202BH1E	6- 1	AK		C	
QCNW-3044BHZZ	1- 42	AE		C	
QCNW-3057BHZZ	1- 41	AN	N	C	
QCNW-3065BHZZ	1- 40	AE	N	C	
QCNW-3066BHZZ	1- 33	AE	N	C	
QCNW-7451BHZZ	1- 43	AG		C	
QCNW-7804BHZZ	2- 3	AL		C	
QCNW-7805BHZZ	1- 17	AF		C	
〃	5- 11	AF		C	
QCNW-7811BHZZ	5- 12	AM		C	
QCNW-7815BHZZ	1- 8	AR		C	
QCNW-7824BHZZ	5- 13	AE		C	
QFS-B0323QCZZ	5- 15	AC		A	
QFS-H0001QCZZ	5- 14	AG	N	A	
QFSHD2109AFZZ	5- 16	AC		C	
QSW-M6872BHZZ	4- 14	AR		B	
QTANP0004BHZA	1- 46	AE		C	
【R】					
RALMB6646BHZZ	5- 17	AQ		B	
RC-EZ106ARC1A	5- 18	AD		C	
RC-KZ1054CCZZ	5- 19	AB		C	
RC-Z1N104RCZZ	5- 20	AA		C	
RCiLC6647RCZZ	5- 21	AE		C	
RCŌRF5029SCZZ	1- 50	AL		C	
RCŌRF6698BHZZ	1- 27	AR		C	
RCŌRF6704BHZZ	1- 49	AK	N	C	
RCŌRF6712BHZZ	1- 48	AG		C	
RCRM-7001BHZZ	5- 22	AH		B	
RCRSP6676RCZZ	5- 23	AG		B	
RMPTC8563QCJB	5- 24	AC		B	
RTRNP2411BHZZ	1- 25	BF	N	B	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
【S】					
SPAKA8255BHZZ	4- 38	AC		D	
SPAKA8366BHZZ	3- 3	AT		D	
SPAKA8367BHZZ	3- 1	AT		D	
SPAKC3114BHZZ	3- 4	BB	N	D	
SSAKA5004CCZZ	4- 10	AA		D	
SSAKH3012CCZZ	3- 10	AA		D	
SSAKH3015CCZZ	3- 6	AA		D	
SSAKH4231CCZZ	3- 5	AA		D	
【T】					
TCADH6788BHZA	3- 13	AC		D	
TCADH6795BHZZ	3- 13	AC		D	
TCAUZ6684BHZA	1- 13	AE		D	
TCAUZ6685BHZB	1- 13	AF		D	
TiNSE2400BHZZ	3- 7	AV	N	D	
TiNSK2401BHZZ	3- 7	AZ	N	D	
【U】					
UBATZ6661BHZZ	1- 37	BA		B	
UBNDA6630BHZZ	3- 14	AK		C	
UiNK-1001CCZZ	3- 8	AK		S	
〃	7- 3	AK		S	
【V】					
VCCCPU1HH220J	5- 25	AA		C	
VCCCPU1HH330J	5- 26	AB		C	
VCEAGA1CW106M	5- 27	AA		C	
VCEAGA1CW107M	5- 28	AC		C	
VCEAGA1CW226M	5- 29	AB		C	
VCEAGA1CW337M	5- 30	AB		C	
VCEAGA1HW335M	5- 31	AB		C	
VCEAGD1CW108M	5- 32	AE		C	
VCEAGD1HW337M	5- 33	AF		C	
VCEAGU1HC688M	5- 34	AY	N	C	
VCKYPU1HB102K	5- 35	AA		C	
VCKYPU1HB221K	5- 36	AB		C	
VCKYPU1HB331K	5- 37	AA		C	
VCKYPU1HB332K	5- 38	AA		C	
VCQYNA1HM333K	5- 39	AA		C	
VHD1D4B42//-1	5- 41	AD		B	
VHD1N4002G/-1	5- 40	AA		B	
VHDDSS133HV-1	5- 42	AA		B	
VHDPS102R//-1	5- 43	AD		B	
VHDRB441Q40-1	5- 44	AD		B	
VHEMTZ20D//-1	5- 45	AA		B	
VHEMTZJ18B+-1	5- 47	AC		B	
VHERD6.2EB/-1	5- 46	AD		B	
VHiD78045F097	5- 48	AY	N	B	
VHiKiD65003AP	5- 51	AE		B	
VHiLH52B256N9	5- 49	AW		B	
VHiMC34063AM1	5- 50	AG		B	
VHiMC74HC373N	5- 52	AK		B	
VHPHDSP5621-1	5- 53	AM		B	
〃	6- 2	AM		B	
VRD-RC2EY000J	5- 54	AA		C	
VRD-RC2EY100J	5- 55	AA		C	
VRD-RC2EY101J	5- 56	AA		C	
VRD-RC2EY102G	5- 57	AA		C	
VRD-RC2EY102J	5- 58	AA		C	
VRD-RC2EY104J	5- 59	AA		C	
VRD-RC2EY105J	5- 60	AA		C	
VRD-RC2EY121J	5- 61	AA		C	
VRD-RC2EY123J	5- 62	AA		C	
VRD-RC2EY153J	5- 63	AA		C	
VRD-RC2EY221J	5- 64	AA		C	
VRD-RC2EY222J	5- 65	AA		C	
VRD-RC2EY223J	5- 66	AA		C	
VRD-RC2EY270J	6- 3	AA		C	
VRD-RC2EY272J	5- 67	AA		C	
VRD-RC2EY300J	5- 68	AA		C	
VRD-RC2EY334J	5- 69	AA		C	
VRD-RC2EY362G	5- 70	AA		C	
VRD-RC2EY392J	5- 71	AA		C	
VRD-RC2EY471J	5- 72	AA		C	
VRD-RC2EY472J	5- 73	AA		C	
VRD-RC2EY563J	5- 74	AA		C	
VRS-RE3DA221J	5- 75	AB		C	
VS2SB1243++-1	5- 77	AG	N	B	
VS2SB1340//-1	5- 78	AL		B	
VS2SB926-S/TC	5- 79	AD		B	
VS2SC3784-/-1	5- 81	AD		B	
VS2SC4153-/-1	5- 82	AG		B	
VSDSC001-//-1	5- 80	AA		B	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
VSKTA1271//-1	5- 76	AE		B	
VSKTC1027//-1	5- 83	AG	N	B	
VSKTD1414//-1	5- 84	AL		B	
【X】					
XBBSC30P08000	1- 11	AA		C	
XBPBZ40P08K00	1- 22	AA		C	
XBPSD30P06000	5- 85	AA		C	
XBPSD30P10KS0	1- 30	AB		C	
XEBSD30P06000	2- 18	AA		C	
XEBSD30P08000	1- 16	AA		C	
XHBSD30P12000	4- 26	AA		C	
XHBSD40P06000	1- 21	AA		C	
XHBSD40P12000	4- 39	AA		C	
XHPSC30P08000	4- 41	AA		C	
XHPSD30P06K00	1- 10	AA		C	
XJPSD30P08000	2- 5	AA		C	
XJPSD30P12X00	1- 44	AB		C	
XJPSD30P16X00	1- 24	AB		C	
XNESD30-24000	1- 20	AA		C	
XNESD40-32000	4- 24	AA		C	
XNESD60-50000	4- 29	AA		C	
XRESJ50-06000	4- 20	AA		C	
XUBSD30P08000	4- 5	AA		C	
XWSSD40-10000	4- 23	AA		C	
XWSSD60-15000	4- 30	AA		C	
【0】					
00B1009882///	1- 45	AC		C	
00BF703301010	3- 15	AQ		C	

SHARP

COPYRIGHT © 1999 BY SHARP CORPORATION

All rights reserved.
Printed in Japan.

No part of this publication may be reproduced,
stored in a retrieval system, or transmitted,
in any form or by any means,
electronic, mechanical, photocopying, recording, or otherwise,
without prior written permission of the publisher.

SHARP CORPORATION
Information Systems Group
Quality & Reliability Control Center
Yamatokoriyama, Nara 639-11, Japan
1999 September Printed in Japan

ER-A320US

SHARP

COPYRIGHT © 1999 BY SHARP CORPORATION

All rights reserved.
Printed in Japan.
No part of this publication may be reproduced,
stored in a retrieval system, or transmitted.
In any form or by any means,
electronic, mechanical, photocopying, recording, or otherwise,
without prior written permission of the publisher.

SHARP CORPORATION
Information Systems Group
Quality & Reliability Control Center
Yamatokoriyama, Nara 639-1186, Japan

1999 September Printed in Japan (t)